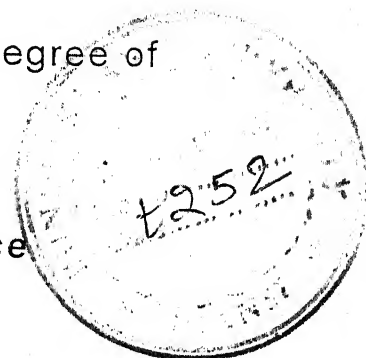


**INTELLECTUAL PROPERTY RIGHTS (IPRs)
WITH
SPECIAL REFERENCE TO COPYRIGHT ISSUES
IN
ELECTRONIC INFORMATION AGE :
CHALLENGES & IMPACT**



Thesis submitted for the award of the Degree of
Doctor of Philosophy
in
Library and Information Science



Under the supervision of
Prof. M.T.M. Khan

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2003

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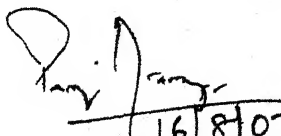
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CERTIFICATE

This is to certify that the work embodied in the thesis entitled
*"Intellectual Property Rights (IPRs) with special reference to
Copyright issues in Electronic Information Age : Challenges and
Impact"* is submitted by Shri Joginder Singh Burman for the
award of the degree of **Doctor of Philosophy** in Library and
Information Science. It is a record of the bonafide research work
carried by him under my supervision and guidance. This work has
not been submitted elsewhere for a degree/diploma in any form.

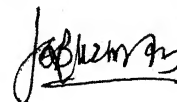
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period required under the Ph.D degree, ordinance-7 of the
Bundelkhand University, Jhansi.


16/8/03
(Prof. M.T.M. Khan)

DECLARATION

I do hereby declare that the thesis entitled, "*Intellectual Property Rights (IPRs) with special reference to copyright issues in Electronic Information Age : Challenges and Impact*" submitted to Bundelkhand University, Jhansi has not previously formed the basis for the award of any degree, diploma or other similar title or recognition. This work embodies the results of my original research and reflects advancement in this area.

Date :



Place : Jhansi

(Joginder Singh Burman)

PREFACE

The 21st century Libraries vis-à-vis Information centres & the Professional find themselves at the threshold of an explosive revolution. The world has entered into an era of instant communication. A person sitting in the remotest corners of India can enjoy live performance taking place in the far a way places like America or Africa, thanks to Electronic media. It is an era of fast technology (IT). In recent times, techniques for reproducing documents and access to documents through faster communication has become reality. Simply, inexpensive and readily available magnetic tape reproduction equipments with low cost tapes, cassettes have made copying of phonograph records simple. New computer technology has brought a revolutionary change. These technologies are providing unlimited opportunities for communication between people and helped many people to reproduce documents and other materials illegally on a large scale causing problems to copyright owners and Government agencies. There is an urgent need to study the Laws related to printing and other media at different levels.

Laws are responses to challenges. The challenges can be social, economic and/or technological copyright law is no exception to this general rule as it emerged as a response to technological challenges. Every time a new technology that had an impact on the reproduction distribution and transmission of works protected under copyright.

Copyright are mainly concerned with authors, publishers, librarians, person related to film industry and music industry. Patents, trademarks, information sources, movies, gramophone records, cassettes and computer software are directly related to Intellectual products. Librarians are deeply concerned with these rights as their work is closely related to the acquisition storage and retrieval of Information.

Over the year's copyright law under went a number of changes, not a small number of which were responses to technological advancements. The technological development that has concerned the greatest challenge to publishing industry is the emergence of the digital technologies in the nineties. Apart from the possibilities that this new technology has opened up for individuals in copying and manipulation of works, it has spawned a new kind of publishing, that is, e-publishing and new kind of work, that is, multimedia work, both of these have raised a multitude of challenges to the copyright regimes in India and in other countries.

The Intellectual Property Rights and copyrights are important not only at National but also at International level. We are facing many challenges in this field. However, the people are not adequately aware about the Intellectual Property Rights and copyrights. The present study discusses all these issue in depth and present the scenario properly.

The whole thesis is divided into seven chapters, numbered as chapter one to seven. The chapters are further divided into sections and sub-sections, numbered using decimal fraction notation. The content of the chapters are summarized as follows –

Chapter- I

The first chapter is an introduction of this research study. After giving general background, it introduces 'Intellectual Property Rights (IPRs)' and 'Copyright', explain the problem being studies, pronounces the importance, need, objectives and overview of related study and research strategy of the present study.

Chapter-2

Described the Intellectual Property Rights (IPRs), its main branches, nature, protection to IPRs, Emerging trends in IPRs and Economic development, New Bills

relating to IPR, Technological Challenges to IPRs and Evolution of IPRs at Global and National level.

Chapter-3

Deals with the emergence of electronic publication issues and Trends. It describes the historical background of e-publication, copyright issues in e-publication, need and Importance, Existing publication Routes and their drawbacks, advantages and disadvantages of Non-print media and differentiation between print document and electronic documents. Further discusses the role of librarian and publishers in e-publication. It also provides the future trends in E-publishing.

Chapter – 4

This chapter explains the concept of copyright and its impact on electronic information environment. The problem that is worrying scholars, researchers, educators and consumers of modern information is the possible impact that new technologies may have on the copyright law and consequent burdens on the Information users. It has been described the copyrights in computer programmes, piracy issues, protection of Software and data, copyright at national and international level and FAQ for web creators.

Chapter- 5

Describes the role of copyright societies and publishing Industry in the protection of copyright in this electronic information age. It deals with need, power and procedure of Copyright Societies, Piracy picture in music showing the raids carried out in India, how to recognize pirated version, checklist for publishers and challenges that lie ahead for libraries and publishers. It also discusses some random tips and thoughts in this direction.

Chapter- 6

It contained observations and suggestions for amending the copyright act, 1957 for the protection of Electronic Information.

Chapter- 7

Last chapter deals with the summary and conclusion formulated during the course of present study.

A select bibliography/Webliography of books, periodicals and other sources consulted is given at the end. For reference and bibliography ISI Standard is followed.

ACKNOWLEDGEMENT

*Words are too weak to express one's feelings of gratitude. I feel deeply indebted to my learned supervisor **Prof. M.T.M. Khan, Head, Department of Library and Information Science and Dean, Faculty of Arts, Bundelkhand University, Jhansi** for his indispensable guidance incessant encouragement and valuable help during the entire period of this investigation. Despite his pressing scholarly engagement and busy schedule he has taken great pains in going through the details of the work minutely. His valuable suggestions and creative criticism proved to be a boon. I can not forget to express my thanks for his warm and affectionate hospitality.*

*A particular debt of gratitude is owed to **Prof. Ramesh Chandra, a truly renowned scientist, unique and dynamic visionary personality and presently, Vice Chancellor, Bundelkhand University, Jhansi** for his genuine interest, valuable advices from time to time & blessings and who readily acceded to my request to submit the thesis. Without his kind permission, this project could not have come to fruition.*

*This is my profound privilege to record my sincere thanks and gratefulness to **Dr. (Mrs.) Ashu Shokeen, - Chairperson** and all other faculty members of Kurukshetra University, Kurukshetra my mother institution, for their consistent encouragement and timely help whenever required.*

Help rendered by my colleagues, library staff of Bundelkhand University, Jhansi and friends is thankfully acknowledged.

I submit my gratitude to my reverend parents Shri. Suraj Bhan and Smt. Bhanwati, who always motivated to get higher education.

Without my wife Nisha and children's unconditional love, emotional support and understanding, this project could not have materialized. I cherish and thank them. In fact, I have gained at the cost of hardship they have suffered.

I would like to thank God Radha Swami for giving me the skills, knowledge, patience and desired needed to write this project.

Above all, I also want to take an advantage of this opportunity to record my thanks for all those renowned authors from whom I borrowed so profusely.

(Joginder Singh Burman)

List of Abbreviations/Acronyms

ACM	:	Association for Computing Machinery.
ADR	:	Arbitration and Alternative Dispute Resolution.
ARIPO	:	African Intellectual property Organization.
ARP	:	Advance Research Projects Agency.
BSA	:	Business Software Alliance.
CCC	:	Copyright Clearance Centre.
CD-ROM	:	Compact Disc Read Only Memory.
CNRI	:	Corporation of National Research Initiatives.
CPC	:	Community Patent Convention.
EAPC	:	European Patent Convention.
ECMS	:	Electronic Copyright Management Systems.
ELINOR	:	Electric Library and Information retrieval On-line.
ERCOMS	:	Electric Reserve Copyright Management System.
ERIC	:	Educational Resources Information Centre.
GATT	:	General Agreement on Tariffs & Trade.
GDP	:	Gross Domestic Product.
HTML	:	Hyper Text Markup Language.
IAHC	:	International Adhoc Committee.
IANA	:	Internet Assigned Number Authority.
IFLA	:	International Federation of Library Association.
IFPI	:	Information Federation of Phonographic Industry.
ILO	:	International Labour Organization.
IPAB	:	Intellectual Property Appellate Board.
IPC	:	International Patent Convention.
IPR	:	Intellectual Property Rights.
ISP	:	Internet Service Providers.

LACA	:	Library Association Copyright Alliance.
NAFATA	:	North American Free Trade Agreement.
NLSIU	:	National Law School of India University.
OAPI	:	Organization African de la Propriete Intellectuelle.
OCLC	:	On-line Computer Library Catalogue.
PATRON	:	Performing Arts teaching Resources Projects On-line.
PCT	:	Patent Cooperation Treaty.
PDF	:	Portable Document Format.
PGP	:	Pretty Good Piracy.
POP	:	Union of Protection of Plant variation.
SCRIPT	:	Society for Copyright Regulation of Indian Producers for Films and Television.
SGML	:	Standard Generalized Markup Language.
TLD	:	Top Level Domain.
TRIPS	:	Trade Related Aspects of Intellectual Property Rights.
UCC	:	Universal Copyright Convention.
ULIP	:	University Reserve Copyright Management System.
UNCITRAL:	:	United Nations Commissions International Trade Law.
UNESCO	:	United Nations Educational Scientific & Cultural Organization.
WIPO	:	World Intellectual Property Organization.
WTO	:	World Trade Organization.

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CHAPTER: ONE

INTRODUCTION

INTRODUCTION

The world has entered into an era of instant communication. A person sitting in the remotest corner of India can enjoy live performance taking place in the far away places like America or Africa, thanks to Electronic (Parallel) media. Telephone and fax have made it possible to communicate oral or written messages across the globe within seconds. The computer aided communication technologies such as E-mail and Internet have added altogether a new dimension to today's communication process by making it more speedy, information and economical. The ways through which different types of information can be communicated have also undergone a sea change. These days a film song can be put in or accessed by a single device along with a textual message and even a painting. While all these have made communication among people more effective and efficient both in terms of time and cost, they pose the greatest threat to the copyright world. Modern communication channels, being intensively relying on a variety of copyrighted products, are liable to be pirated in large scale, if adequate precautions are not exercised (on-line).

Laws are responses to challenges. The challenges can be social economic and/or technological copyright law is no exception to this general rule as it emerged as a response to technological challenges. The technological changes always created challenges to the basic principles of copyright law. Be it the printing, sound recording, visual recording or the recent digital technology, the legal system struggled to ensure that the protection given to the authors that the work through copyright law does not turn to be detrimental to the large public interest. The legal system responded to these changes at the appropriate time and brought in necessary changes in the copyright law to ensure that a proper balance is maintained. Every time a new technology that had an impact on the reproduction distribution and transmission of works protected under copyright.

Copyright are mainly concerned with authors, publishers, librarians, person related to film industry and music industry, patents, trademarks information sources, movies, gramophone records, cassettes and computer software are directly related to Intellectual products. Persons from revenue, police, law and judiciary are actively engaged in protecting these rights. With the new inventions in science and technology, there is rapid growth in production at the equipments useful for duplicating or copying. This has resulted in malpractices, which affects the Intellectual property rights of the owners. In true sense, the Intellectual property rights & copyrights cover not only printed matter but the patents, industrial designs, trademarks, trade secrets, layout designing of integrated circuits and so on. Librarians are deeply concerned with these rights as their work is closely related to the acquisition, storage and retrieval of Information.

1. What is an Intellectual property : Loosely defined Intellectual property is a 'Product of mind'. It is similar to any property consisting of immovable things where in the proprietor or owner may use his property as he wishes and nobody else can lawfully use his property without his permission. The convention establishing the WIPO (World Intellectual Property Organization) in 1967, one of the specializes agencies of the Intellectual property rights shall include 'rights' relating to :

- I. Literary, artistic and scientific work.
- II. Performance of performing artistic, phonograms and broadcasts.
- III. Inventions in all fields of human endeavor.
- IV. Scientific discoveries (No National laws or International treaties as on date give any property rights to scientific discoveries).
- V. Industrial designs.
- VI. Trademarks, services marks and commercial names and designations.
- VII. Protection against unfair competition and all other rights resulting from Intellectual activity in the industrial, scientific, literary or artistic fields.

2. Protection of Intellectual Property :

The owner can best protect his property if he keeps it out the eyes and knowledge of the world. But in this situation the progress of the nation will be hampered and also the owner or the property will not be in a position to use his property at his will. Therefore appropriate nation legislations govern the Intellectual property rights (IPRs).

The national legislations specifically describe the inventions which are the subject matter of protection and those, which are excluded from the protection. Only preparation of laws for protection of Intellectual property rights does not fulfill the aim. Execution of the laws effectively and awareness of these role in its success. Such awareness can be effectively created by the educational institution. The Intellectual property rights and copyrights are important not only at National but also at International level. The two international conventions on copyright namely the Berne convention for the protection of literary and artistic works (1948 Brussels Text) and the Universal Copyright Convention (1952) have played an important role in creating the atmosphere useful to protect the copyright at international level. These conventions were reserved at Paris in 1971. This revision at provided certain additional facilities to enable the developing countries to grant compulsory licenses for translation and reproduction and works of foreign origin required for the purpose of teaching, scholarship or research or for purpose of systematic instructional activities. India being a number of these two International conventions has amended the copyright act of 1983 in which further amendments were made in 1984 and in 1992.

We are facing many challenges in the field of Intellectual property rights. Different countries have claimed the patents related to the agricultural products. Considering the globalization and GATT, Considerable thought and deliberation have attempted to evolve a consensus on trade related Intellectual property rights. These have also been adopted by WTO. Various laws in order to preserve

biodiversity and to safeguard our agricultural products were passed by the parliament of India. However, due to the increased number of researchers carried out in the universities and in other research institutions, it has become essential to create such environment in which there will not be a malpractice or piracy of original products.

Intellectual property rights and copyrights ensure the originators such a protection so that even a new design, logo, trademark can be protected for its misuse. Even a piece of art literature, computer programme, biological wealth and cultural heritage can be protected with the help of these acts. However, the people are not adequately aware about the Intellectual property rights and copyrights. The present study discusses all these issues in depth and I hope it will present the scenario properly.

3. Importance of the Study :

Intellectual property rights (IPRs) are intangible rights that are bestowed upon a creator or originator for protecting his creative ideas or original expression with the advent of the knowledge era, intellectual capital has gained enormous importance and consequently IPRs have become a precious commodity. Patents are one of the most important IPRs.

In India unfortunately, there is no provision for software to be patented. According to Mahesh Madan Bhat, a lawyer with J. Sagar Associates, a law firm in Bangalore, "A software program is an algorithm and patent law does not protect algorithms *par-se*". The term 'software' includes computer programs, databases, computer files, preparatory design material and associated printed documentation, such as user's manual.

Under Indian law computer programs have copyright protection. But the IT industry says computer programs should have patent protection, which is more

comprehensive than copyright laws. Anything under the sun can be patented provided it satisfies the test of novelty, usefulness and non obviousness. In recent times the patent law worldwide has emerged as a powerful means of protecting computer programs as a patent has inherent advantages over a copyright says A.Vinash Vashiyta, CEO, NeoIT, an e-service firm.

Patents protect software against reverse engineering, where the source code of a program is recreated from the supplied object code. In its source form, a computer program is much easier to amend. Many software and hardware companies have so far taken advantage of the copyright law's lack of protection against creation of "Clones" through reverse engineering. Says Vashista. For example, under the Indian Copyright Act, copying from an engraving is an, infringement of copyright, but an engraving produced independently from the same picture is not. Copyright law's generally do not protect the owner from independent creation or reverse engineering.

Patent laws eliminate this loophole by providing protection irrespective of whether the work was independently created or copied. Even if the infringing device was created without the knowledge of the original device, it is an infringement of the software patented cannot be reverse engineered and sold by another company.

A patented software code presents others from using the software algorithms without permission and also prevents companies' people from creating software programs that perform similar functions. The copyright law, in contrast can only prevent the copying of a particular expression of an idea and can be used to prevent total duplication of a software program as well as the copying of a portion of a software code.

Unfortunately, there are no guidelines or stated procedures office with regard to computer software. The IT Act, 2000, also does not provide any lead in

this direction. Consequently, Indian firms/individuals have to go to the use for getting their products patented – a cumbersome and expensive process.

According to a report by software industry forum NASSCOM, in 2000 Indian companies introduced 122 software products in the domestic market, while foreign companies launched 158 software products. However, most Indian products don't have patent protection.

Besides copying of software codes, the biggest challenge that law enforcing authorities face today is that of cyber squatting, that is, illegal registration of Internet domain names of famous companies, brands and personalities. In a recent case (Yahoo.Inc. vs Akash Arora Anr 78 1999) the Delhi High Court granted injunction in favour of yahoo Inc. against the defendant. The defendant had created a web-site yahooindia.com, nearly similar to the plaintiffs renowned yahoo.com., providing almost comparable services. The court granted an injunction restraining the defendants from using the name yahooindia.com.

The WIPO, UN agency, had convened an international meet to develop recommendations covering intellectual property associated with internet domain names, including dispute resolution. The recommendations have been made available to a new organization, the Internet Corporation for Assigned Names and Numbers (ICANN), which manages the Internet domain name system.

Today we live in a world of instant global communications. It is an era of fast technological developments and Information technology. In recent times technologies of reproducing documents and access to documents through faster communication has been reality. New techniques for sound recording and visual images have increased. Simple, inexpensive and readily available magnetic tape reproduction equipments with low cost tapes, cassettes have made copying of phonographs records simple. New computer technology has brought a revolutionary change. These technologies are providing unlimited opportunities for

communication between people and new tools for teaching. These have helped many people to reproduce documents and other materials illegally on a large scale causing problems to copyright owners and government agencies. A number of laws are being enacted to protect copyrights.

Librarians have an important role in protecting the rights of the patent holders, copyright holder and other in the field of industrial designs, trademarks, trade secrets, layout designers of integrated circuits etc. The librarian should keep themselves aware with the latest changes in IPR and to oversee their proper implementation while purchasing books and other materials and also when these are used in the library. It is a social obligation that the librarians have to perform.

4. Statement of Problems :

Internet and the digital revolution pose some complex problems for copy right law. The three technological advances, which have turned the economics of information upside down, namely :

- I. *Digitization of Information* : which has changed the economics of reproduction.
- II. *Networking* : which has changed the economics of distribution; and
- III. *World Wide Web (WWW)* : which has changed the economics of publication.

In all the three cases cited above the changes is simply mind boggling because costs have sunk to unimaginable levels as a result of which traditional of copyright was predominantly concerned with copyright piracy caused by printing press modern copyright law is predominantly concerned with the ease with which copyrighted works can be replicated in the digital medium. Briefly stated the problems posed by the digital medium are outlined below :

- 4.1 First Problem : Digital Medium creates difficulties in the way in which copyrighted products are distributed. In the digital medium copyrighted work

is licensed rather than sold. Before the advent of digital era copy righted material were transferred by way of sale of physical copy of a work. Sale involve complete transfer of ownership which means rights in a copy transferred from the vender to the purchaser. Copyright law recognizes this principle by recognizing the first sale rights are given to consumers so that they might sell a book they purchased to someone else licensing constitutes a limited transfer of rights to use on terms agreed between the parties the provisions upon by law contract. This prevents the copyright owner from controlling copies distributed publicly once sold in the market place. It enables the owner of an authorized copy to dispose of it without securing the copyright owners consent. The copyright owner can authorize the first distribution of a particular copy or phono record to the public, but the recipient of that copy is entitled to reuse it, resell it, loan it, display it, or give it away. Copies of most copyrighted works may be rented, for profit, again and again, without the copyright holder's consent. All of these uses could generate revenue for copyright owner were they entitled to demand it, although that entitled to demand it, although that revenue come at a significant reduction in access for consumers who are unable or unwilling to buy it at the market price for new copies. But if the work is licensed there was no sale in the first place. In other words if a buyer owns CD with the soft ware he only has the license to use the product, not the right to resell it. Un restricted disposition is an essential attribute of ownership. Licensing effectively ends the first-sale doctrine. Dispensation of the first sale doctrine only to be replaced by the right of commercial rental, will enable the copyright owner to retain books by way of lending or otherwise free from copy right control.

- 4.2 The second problem posed by internet is the question of what constitutes copying in the digital medium. There is an intimate connection between access and copying in the digital medium. The essence of copyright law is to confer upon author's exclusive work to control the reproduction of their work

in copies. Application of this right to the digital medium poses difficult questions. For a user to view a document a copy of that document must be loaded into the random access memory (RAM) of the user's computers otherwise, no image will appear on the monitor,. Whether this temporary copy in RAM should be considered a reproduction under the copyright Act is not free from controversy while reading a book or watching a movie does not involve making of copies since the effect is only ephemeral the same is not true with the digital medium because access to digital information by making ephemeral copies is inherent in the way in which computers function.

Catching is storing of the web pages at the computers memory at the local or at the server level. Transmission catching refers to store and forward transmission which consists of intermediate storage of digital packets sent over a computer networks while the packets are being transmitted from node to node. This type of forward transmission would have copyright implications would have copyright implications only in exceptional cases. Client catching is a temporary storage of previously loaded or downloaded documents by another computer of the end user triggered by the users browsers. Depending upon the users browsing pattern a document will remain cached for hours days or even months. Client caching merely facilitates consumptive usage. The temporary productions made on the purpose RAM or hard' disc have no other purpose than to facilitate browsing or viewing the web. Client caching does not enable or facilitate the communication of documents cached nor it otherwise instrumental in exploiting copyright works. The presence of cache files are not visible to the ordinary user and the RAM cache will be automatically emptied with the shut down of the computer and those cached on the hard disc will be regularly cleaned up after the disc space allotted to caching is exceeded. In view of the foregoing the right of reproduction is not contravened by client caching. However, it is a different matter in the case of proxy caching. Proxy server are installed in networks near the point of contracts to the internet. Proxy servers store local copy of all web pages in its

cache memory and when a request is made for the same web page it serves the web page from the local storage rather than to access the original website which will be time consuming. In other words a proxy server intercepts all requests for web pages and tries to fulfill them locally. This type of caching is known as proxy caching, system caching or server caching. It is a temporary storage of previously delivered web pages under the control of an access provider or the LAN operator. This facility speeds up the internet access and conserves valuable bandwidth. By enabling temporary storage of web pages at various local levels. Caching prevents traffic jams in cyber space. A document will remain in the proxy cache for several hours or even days. Copies made in proxy cache is privately intended for the communication of the cached works to other users and such caching will amount to reproduction even if the documents are stored temporarily.

The Berne convention does not provide for general right of distribution or right of communication to the public. The exploitation right guaranteed by the Berne convention includes the right of reproduction. Article provides that authors of literary and artistic works protected by the convention shall have the exclusive right of authorizing the reproduction of these works in any manner or form. The expression in any manner or form has been interpreted to include the storage of a protected work in the digital medium including caching which amounts to reproduction within the meaning of Article 9.

- 4.3 Third problem posed by internet relates to search engines. A search engines builds periodically directing of frequently visited sites and also of the meta tags which are key words which describe the content of the web page. Question arises whether a return produced by search engine links a content which contains infringing material would constitute copyright infringement.

4.4 Fourth problem posed by internet is linking, linking and deep linking pose new problems for copyright. Hyper Text Transfer Protocol (HTTP) facilitates linking of one website with another without the knowledge or consent of the owner of the linked websites. Hyper text link is an embedded electronic address that points to another internet location that points to another internet location and takes the user to that location on clicking on that link. If such link takes the user to a site which infringes the copyright, question of liability for copyright infringement. Similarly deep linking occurs when selective contents of subordinate pages of a home page are linked by another person thus by passing the top page in the hierarchy leading to loss of revenue due to taken fact users will not be aware of the real owners of the site. Deep linking raises questions about weather such linking infringes the copyright of the target site provides that four specific types of copying will not constitute copyright infringement if the service provider adopts and implements "reasonable" policies concerning terminating subscribers who transmit infringing material and does not interfere with "standard" technical measures used by copyright owners to identify and protect their works.

The copyright act 1957 though amended in 1994 and 1999 to take care of the technological changes still requires major amendments to deal with the challenges posed by internet and the digital revolution. The liability of service providers are required to be clearly spelt out as in the digital millennium copyright act 1998. The US has adopted copyright specific approach while dealing with service provider's liability for all sorts of wrongdoings like defamation etc.

The object of copyright is promotion of learning and protection of public interest in making available as much information as possible in public domain and also to benefit the author. Free exchange of ideas and public access to knowledge are equally important. Public access to published information an important goal of copyright law. Normal mode of publication

is the distribution of physical copies of work which has been effective in enabling public access. Once copies are published and works were purchased by libraries and other members of the public it becomes part of the social and cultural record of the society. Publication is irrevocable in the sense that once copies are made public it can not be unpublished excepting when the copies may be withdrawn. Old editions can be replaced with later editions but still historical record will contain its varieties. Works can be removed at the instance of the owner of the copyright and public access to works in digital medium can be controlled by technical protection means. Since copyright protection is a monopoly it is dangerous to expand the scope of copyright protection at the cost of acquisition of knowledge by the public.

5. Objective of the Study :

Copyright is a unique kind of Intellectual property and its importance is growing day by day. It is the human beings who have the capacity of creativity. They can be author, compose, artistic and designer for creating and producing original works.

In order to protect the rights of authors and artists who create and produce intellectual products various countries of the world have enacted copyright laws and India is no exception in this regard. The copyright acts have been enacted to check the piracy i.e, infringement of rights so that the fruits of the labour put forth by the authors or the copyright owner may be enjoyed by the deserving authors and copyright owners and not the pirated or plagiarists who undermine the rights of Intellectual property creators. The following are the objective of the present study :

- 1) To introduce the origin, trends and development of Intellectual property right.
- 2) To identify and assess the cyber crime.
- 3) To highlight the Impact of copyright in Electronic Environment.

- 4) To assess the role of institutions/distributors etc.
- 5) To suggest ways and means for controlling the Electronic Information under the umbrella of copyright law.

6. Review of Literature :

The study is based on documentary as well as non-documentary sources. An extensive literature searches was conducted to ascertain availability of literature on the proposed study. Together with these efforts, searches had been conducted through Internet also to find out relevant literature. Though vast amount of literature was available of the present work i.e. issues concerning IPR copyright, Electronic technology, Electronic publishing etc.

Kumar (2003) :

The issues are thus becoming more complicated with pricing of information in electronic media and thus the whole issue of copyright is being reviewed all over the world. As regards to the use of books and issues pertaining to libraries, the existing norms, conventions and regulations are to be kept in mind.

Naufal (2003) :

This paper examines damaging effects of the malicious IT misuse and abuse and also presents some broad recommendation towards addressing the problems. It thus presents major challenges to ethical use of IT cyber crime poses serious threats to the integrity, safety and quality of any system. Conventional security measures are inadequate to cope with criminals using modern technologies.

Ganesh (2003) :

Paper looks at the Impact of Information, Communication and Technology (CICT) in an era of information, with the growth of e-publishing, one of the biggest advantages of e-publishing in the speedy process, retrieval and dissemination of information and also the development of networking model across library and information centres. Access and exchange of information has been made simple through the network for end users.

Satarkar (2003) :

Intellectual property rights, and copyright hold importance in almost all walks of life, be it the field of agriculture, biotechnology, library and information science, with the new inventions in science and technology, there is rapid growth in production of the equipments useful for duplicating or copying. This has resulted in malpractice, which effect the Intellectual property rights and copyright cover not only printed matter but the patents, industrial designs, trademarks, trade secrets, layout designing of integrated circuits and so on.

Librarians are deeply concerned with these rights as their work is closely related to the acquisition, storage and retrieval of information.

Only preparation of law for protection of Intellectual property rights does not fulfill the aim. Execution of the law effectively and awareness of these laws among the society play an important role in this success. Such awareness can effectively be created by the educational institutions.

Intellectual property rights and copyright ensure the originator such a protection so that even a new design, logo or a trademark can be protected from its misuse. Even a piece of art, literature, computer program, biological wealth or cultural heritage can be protected with the help of these acts. However, the people are not

adequately aware of the Intellectual property rights and copyright. This book discusses all these issues in depth.

George (2002) :

Reveals that software is one of the most valuable technologies of the information age. Everything from hand held devices to the internet are run by software. There is no doubt that this technology requires to be protected, what are the challengers presented by the current scenario and does the current framework ensure that neither the creators nor the users are short changed?

Wadehra (2001) :

This book has been written with the intention of making the people aware about the complex subject of Intellectual property rights. It is an attempt to inform the people in general, besides the practitioners in the field of intellectual property rights, The students and those involved in the process of governance at political and bureautic levels, of what is what, what is coming, what are the consequences and what needs to be done to save ourselves from the potential dangers and take advantages of the coming changed leading regime.

All the respect relating to this complex subject have been dealt with in a very simple language touching each aspect i.e. patents, trademarks, copyright, designs and geographical indications separately.

Narayanan (2001) :

Gives an authoritative commentary on the entire gamut of this multifaceted law and explains, inter alia, that though there is no copyright in ideas, yet the copyright in a work giving expression to the idea in a material form automatically subsists as soon as the work comes into existence, provided it is original. If a design is

registered under the designs act of 1911, it is not eligible for protection under the copyright act but to a design not so registrable, copyright will subsist under the copyright act. Again, information relating to any subject is now available through internet and website from anywhere in the world and within a few seconds. Beneficial though they are, the changes introduced in the new millennium enormously increased the scope of piracy of Intellectual property and against which the present law appears inadequate. The work not only highlights all the salient features of the new legislations but also the essential and useful information about all branches of IPR law.

Srivastava (2001) :

The paper discussed the legal aspects of Intellectual Property Rights, Information technology products has been discussed. It is shown that the fast going electronic medium entails increased change of infringement of copyright. The inadequacy of existing Indian copyright Amendment Act, 1994 has been indicated. Changing role of libraries has been discussed and need of making provision in copyright legislation has been stressed for validating this role of libraries

Viswanathan (2000) :

This paper presents the copyright issues in the digital era. Digital medium negates the foregoing assumptions. Digital technology has detached information from the physical plane and application of laws of the physical world to information in the digital medium has resulted in absurdities. Since copyright protection is a monopoly it is dangerous to expand the scope of copyright protection at the cost of acquisition of knowledge by the public.

Moorthy (2000) :

It reveals the development in the information technology have much helped libraries in their day to day operation. However, they also brought with them a number of issues and concerns. One of the major issues which concerns publishers, authors and librarian alike is the copyright. The developments in the electronic publishing, computers and communications fields have further complicated the situation. The Vulnerability of digital information for manipulations makes the problem all the more serious problems relating to copyright of electronic information resources on Internet, multimedia works, computer software, databases and copyright enforcement have been dealt. Security of information including uses of cryptography, digital finger prints and water marks to prevent illegal copying over networks has also been discussed.

Gupta (2000) :

Discussed the emerging focus on the question of protection on databases is guided by the international debate on the proposed WIPO treaty on Intellectual property in respect of databases aimed at harmonizing the national law. In an open economic environment, it is essential to provide for database protection in live with international developments. The paper examines the issues and implication of the proposed treaty in the context of professional developments of library and information services the essential of the principle of substantial investment for the protection of database has been questioned.

It argues for articulation to provide for the use and re-utilization of databases for scientific research, private purposes, education, public health and other social or governmental purpose. The importance of public domain/government owned information has been highlighted. The need of database protection is essential in the context of the growth of information industry and services and attracting foreign investments and exploiting domestic capabilities. The impact of the proposed sui

generic protection on secondary information services like abstracting is an important issue in the Indian context of promotion and progress of science, single source information, information industry and information services, an update on the current debate and perspective has been provided.

Debroy (1998) :

Intellectual property rights has been the most contentious issue in the aftermath of the Uruguay round of negotiations and the final agreement on trade-related Intellectual property rights (TRIPs) more specifically the TRIPs agreement covers seven forms of Intellectual property – patents, copyrights, industrial designs, trademarks, integrated circuit, geographical indication and `undisclosed information and the gap exist not for all of TRIPs, but for patents. Therefore, this book should help to formulate a national strategy, if not a national policy, on intellectual property rights.

Cornish (1996) :

Provides comprehensive and authoritative coverage of the whole spectrum of Intellectual property law as it applies in the U.K. it takes account of highly significant developments at the European and International levels. It also discusses the GATT agreements on Trade related aspects of Intellectual property rights (TRIPs).

Thairani (1996) :

Deals with an important role of copyright law in the complex world of modern communications. The basic aim of this branch of law is to promote progress in society by affording legal protection to the rights of authors of creative works as well as those concerned with the dissemination of such works to the public. A copyright law needs to be constantly reviewed and revised because methods of communication and using works keep changing and developing.

KOUL (1992) :

Intellectual Property Rights have a direct bearing and symbiosis with inventions and technology. Technology can be defined as a systematic knowledge for manufacturing of a product or of rendering of a service in Industry, agriculture or commerce whether that knowledge be reflected in an invention, a utility model, an industrial design, a plant variety or in technical information in the form of documentation or in skills or experiences of experts for the design, installation, operation or maintenance of an industrial plant or an equipment or for the management of an industrial or commercial enterprise or its activities. Today Science and Technology is the key to the progress of mankind and the intellectual capital formed by scientific resources and the aptitude for the technological innovations expressed in proprietary knowledge constitutes the major assets of any country.

CHAPTER: TWO

INTELLECTUAL PROPERTY RIGHTS (IPRS): CONCEPTS, TRENDS AND DEVELOPMENT

INTRODUCTION

Intellectual Property is the creative work of the human mind. The main motivation of its protection is to encourage the creative activities. The law of intellectual property has acquired a degree of international acceptance and recognition. It has importance on all fronts, Economic Social and Cultural on a national canvas. The basic theme of this branch is to promote progress in society by protecting some of the finer manifestation of human achievements. With industrial growth and globalization of excellence in civilization aspects everyday, the horizons of intellectual property law are becoming wider day by day. We are in the company of netizens and this word has become a global village.

1. Traditional Approach :

IPR is not a new phenomenon. The evolution of the concept of IPR at international level dates back to 1883 when Paris convention was adopted for the protection of Industrial Property such as patents, Trademark's, designs etc. Since then many attempts have been made to address the problem of protection the IPR's and to put it at rest, but it has been cropping up again and again for the simple reason that the various parameters and approaches to the question have themselves been undergoing changes. Finally, it has been set to rest with the adoption of agreements on trade-related aspects of Intellectual Property Rights (TRIPS) in the WTO regime.

Industrial Property Law under Paris convention 1883 embraces protection of inventions by means of trademark law and law on trade names, and also the law on protection of industrial designs, of plant varieties, etc.

2. Intellectual Property : Its Main Branches :

Intellectual Property consists, in the main, of two branches namely-

- i. Industrial property, largely in respect of technological inventions, Trademarks for goods and services, industrial designs, and

- ii. Copyright, largely in literacy, musical, artistic, photographic and audio-visual works.

The principal objective in Protecting Intellectual Property is again in the context of the development of developing countries, to encourage creative activity and to provide to the public easily, economically and speedily, the result of such activity.

Encouragement of creative activity requires not only the recognition of the creators per se, but providing for them a means of obtaining a reward for their ideas and inventions. The creator, be it an individual or an enterprise, has also to be accorded the right to prevent others from using his or her, or its ideas without consent and without compensation or remunere being paid to the individual creator or the concerned enterprise.

The availability of such an exclusive right also provide legal security as well as the necessary fillip to scientific and technical institutions and enterprises that are washing to do so, to encourage, through material resources and the necessary funding, their employees to use their skills in research and development of worth while new ideas that can be utilized in providing existing products or in making new products.

The existence of such an exclusive right will also be the legal basis for contractual arrangements between the creators or the ones developing the ideas on the one hand and the institution or enterprise wishing to use those ideas in the manufacturing process, on the other.

In the field of copyright, Creative Intellectual Activity is encouraged by according to the authors, as creators of literary and artistic works, the exclusive rights in them. These rights also provide a legal basis for contractual arrangements / agreements between the author and the producer or distributor of the expression of the author's ideas, whether it be in the form of a book or a play or music performed in a theatre or other public place or as an audio or visual recording or a programme broadcast by radio or television.

The recognition of and encouragement given to, the inventor and creator the protection of his rights and the rights of those who invest in the making of his creations, contribute positively to the socio-economic development of a developing country.

3). Nature of Intellectual Property :

IP of whatever species is in the nature of intangible incorporate property. In each case it consists of a bundle of rights in relation to certain material object created by the owner. In the case of patent the property consist of the exclusive right to use the Invention patented, to grant licences to others to exercise that right or to sell that right to a third person. Patent rights are created by statute and are governed by the patents act 1970(India). The invention may relate to a new product or an improvement of an existing product or a new process of manufacturing an existing or a new product. The acquisition of this monopoly. The conditions to be satisfied for acquisition, its duration, the licensing of this monopoly rights or their assignment to others are strictly governed by the patents act. After the expiry of the term of the patent (which is fourteen years for all products, except in the case of drug and food patents seven years). It becomes public property when anybody can use the patented invention.

In the case of industrial designs the property consist in the exclusive right to apply the design registered under the designs act 1911 now replaced by the designs act 2000, in relation to the class of goods for which is registered for a maximum period of 15 years subject to payment of renewal fees prescribed by the rules. This right can also be licensed for use by third parties or assigned to any person. On expiry of the term of registration anybody can use the design.

In the case of trademark there are two types of rights- one conferred by registration under the trade and Merchandise Marks Act 1958 now replaced by the Trade Marks Act 1999 and the other acquired in relation to a trade mark, trade name or get up by actual use in relation to a some product or service. The rights conferred

by registration are confined to the use of the mark in relation to the actual goods or services for which it is registered. The exclusive rights granted by registration enables the proprietor of the registered mark to prevent others from not only using the mark as registered but also marks which are deceptively, similar to the registered mark i.e. marks which so nearly resemble the registered mark as to be likely to receive or cause confusion among the customers of the goods or services covered by registration. In the case of an unregistered mark, set up and other badges. If good will of business the production is given to the goodwill of the business in relation to which such trade mark, or set up is used. Such protection may also extend, in appropriate cases, to allied goods or business. Unlike patents, designs or copyright the rights conferred by registration of a trade mark can be aviated of for an indefinite period by periodic renewal of registration and the proprietor being able to ward off rectification of the register on the ground under the act.

In the case of an unregistered trademark the right to protection of the goodwill continues indefinitely provided the owner of the goodwill uses the mark lawfully and prevents other persons infringing those rights by appropriate timely action (passing off) in courts of law against the infringes.

Copyright like patents and industrial design is purely a creation of the statute, the Copyright Act 1957 as amended from time to time. But there is no formality required for the acquisition of the time copyright subsists in any original work specified in the act from the moment of its publication during the life time of the author plus sixty years. The copyright (Amendment Act 1999) has effected certain changes in the law. Know-how and confidential information can be protected only so long as the owner is able to keep them secret and takes action against unlawful use of such information by others by an action for breach of confidence or contract.

Although the relevant statute defines the rights conferred on a particular species of Intellectual property as the exclusive right to use the patent / apply the design, use the trade marks or commercially exploit the work in certain forms (as in copyright). In practice what the statute confers is the right to prevent competitors from

commercially exploiting the respective rights to the detriment of the owner of the property.

4). Protection to IPR's :

In the words of W.R. Cornish, patents gives temporary protection to technological inventions and registered designs to the novel appearance of mass-produced goods, copyright gives longer lasting rights in, for Instance, literacy, artistic and musical creations, trade marks are protected against initiation so long at least as they continue to be employed in trade.

It is true that through one of the basic ideas of Intellectual property law is to protect the interest of the society as a whole in its economic and cultural development, yet at the same time this branch of law is necessitated and aims to promote and protect the interests of an individual to secure a fair value for his Intellectual effort or investment of capital or labour.

This protection of individual right is to encourage ship, initiative and individual attainments as also to support status, prestige and position of the inventor and creator.

Without being oblivious of moral contours of protection to the Intellectual property rights, aspects of economic consideration also weighs for grant of protection to progenitors of Intellectual property a right. Grant of economic rights is in recognition of creators and labour as also of investment of his time, energy and money. It is also an endeavor to set off his entrepreneurial risk in producing and marketing his creation. Non-protection of exclusive ownership of such property rights. Would not only be an encouragement but rather would be granting a license to plagiarists and initiators to reproduce copy and hack sabotage and hijack such Intellectual property with much less enterprise and coasts. Another aspect of protection of such rights in public interest i.e. an interest that serves the people at large.

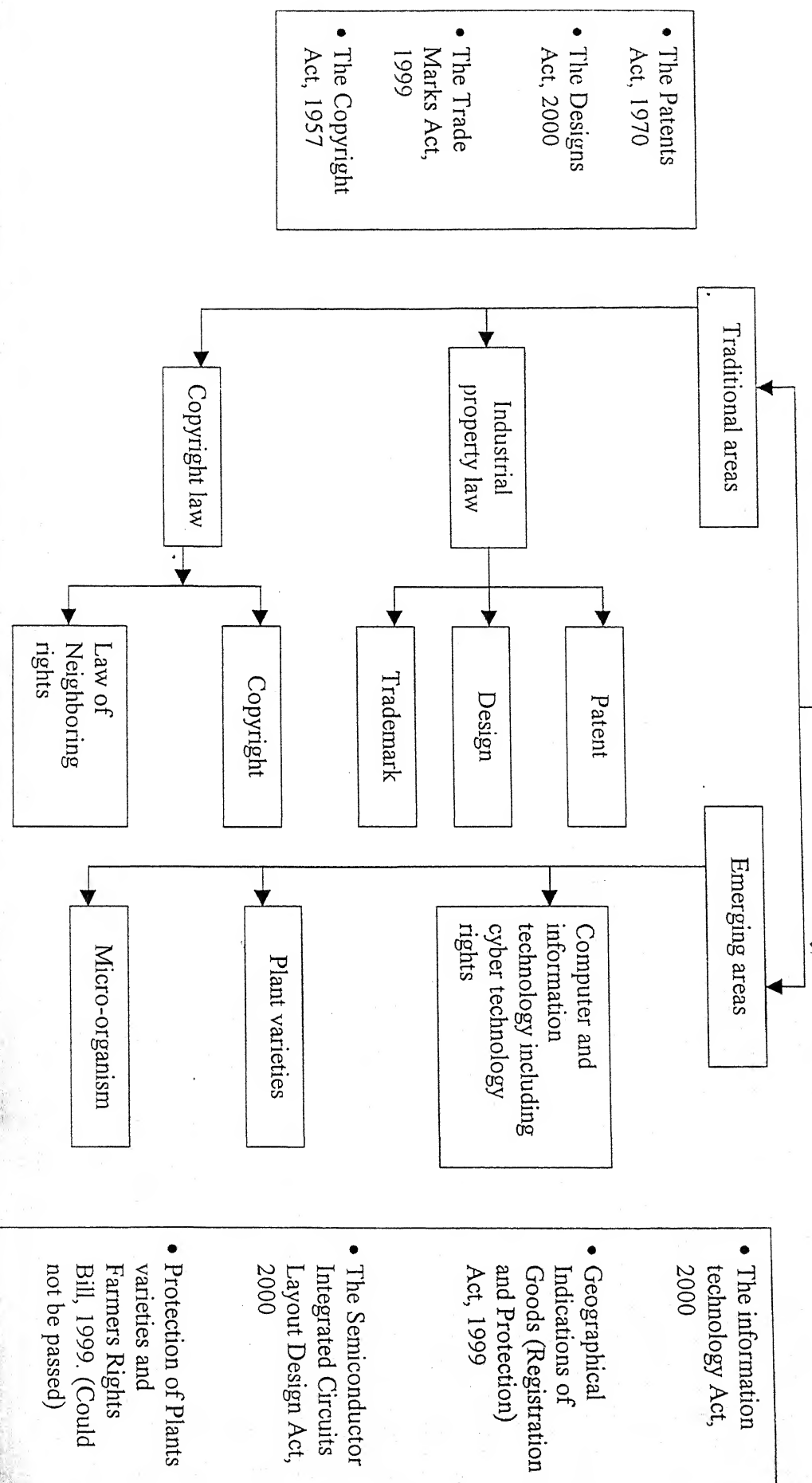
5). Emerging Trends in IPR's :

However, in the recent past, India has witnessed a remarkable revolution in the field of computer and information technology. With the globalization of trade and commerce as also with the fast marching computer technology, internet, cyberspace and electronic communication system in India, now the most important question which arises is as to whether these new developments are covered by the traditional Intellectual property regime? It is noteworthy here that these emerging technological developments are engulfed within the horizons of modern intellectual property regimes. We are encountering cyber laws accosting the IPR's as well. The chart-1 will show that these new developments are the off shoots still remaining within the domain of intellectual property law & therefore, it is submitted that cyber law.

So far as it concerns IPRs, is not a genre different, distinct and set apart from the IPRs proper but is an important hue and shade of intellectual property law itself.

Chart I.

Chart - 1
Intellectual Property Regime : Legislative Overview



Another important question to be debated and discussed is as to whether the copyright, trademark, design and patent laws are sufficient to meet this new challenge or should Indian legal system of intellectual property be shaped to meet the new challenges. Indians have taken a lead in computer and information technology in global perspective and have made a distinct place for themselves. As already mentioned, these creative efforts of human intellect need protection.

Pigeon-holding of IPR'S : Pigeon-holding of IPR'S is explained in the following chart.

Chart – 2
Pigeon – holding of IPR'S

Spread of computerization And advent of information technology	↔ Attracts ↔ ↓	These areas of intellectual property
• Computer programmes • Hardware engineering Drawings.	↔ ↔	Copyright
• Hardware • Software	↔ ↔	Patent
• External feature of Hardware	↔ ↔	Design
• Confidential information, Know-know and technology	↔ ↔	Trade Secret

It is manifestly clear from the above chart-2 that the area of computer programmers and hardware drawings attracts the domain of copyright law where as the hardware and software simpliciter invokes the patent laws, external features of

hardware are taken care of by the design legislation and know-how, technology and confidential information from part of trade secrets.

The copyright act, 1957, was amended in the year 1994. However, there amendments have been enacted in complete oblivion of the advent of internet and its implication. The internet technology incidentally has partially been covered by this amendment in copyright law.

The TRIPs agreement provision for patentable subject-matter states. That patent shall be available for any inventions, whether products or processes in all fields of technology provided they are new, involve an inventive step and are capable of industrial application. At international level, in 1981, in the diamond V. Diehr case, the U.S. Supreme Court ordered the PTO to grant a patent on an invention even through computer software was utilized. In several case laws there after it has been held that a computer-controlled process could be patentable even if the process when controlled by other means was already known as long as the application of the programmer used to the process was not obvious. (Annie George, 'computer software protection- the legal challenges'. Paper presented at the national seminar on challenges of internet / cyber law held by ILI, New Delhi at Vigyan Bhavan, New Delhi on March 3-4, 2001).

The question of the grant of patent to the computer software has not been appropriately addressed by the Indian courts. As stated above, the other areas of this latest technology are related to design and copyright.

At this stage, we would like to mention that the cyber crimes inter alia also consist of crimes against intellectual property heights.

6). Intellectual Property and Economic Development :

The contribution of Intellectual Property to the economic and cultural development of a country is substantial. The granting of patent monopoly in

consideration of the disclosure of the invention enables competitors in the field to manufacture new products improved products or effect improvement in the process of manufacture but for a patent system much of the technological information would have remained secret and lost to the world. As it is the patent specifications which are available to the public contains practically all the information relating to any field of technology. What is not available in the patent literature consists of confidential information industrial and business secrets and what is called Know-how which others have no free access but which could be obtained by negotiation with the owner of such information for a price.

Industrial design protection encourages people with creative faculty to devote their talent and energy in developing new designs for products. This is particularly so is the case of consumer products including toys, garments, furniture and so on.

Protection of trade marks enables consumers to obtain their products of the right quality which they are accustomed to get identifying the product by the mark. If trade marks can not be protected from infringement the market will be flooded with shoddy and spurious goods by unscrupulous persons by copying well known trade marks.

Today copyright affects every industry conceivable. This printing, publishing and entertainment industries like the film and recording industry are almost completely development on copyright protections. The manufacture of any kind of machinery or machine is based on industrial drawings which enjoy copyright protection.

Copyright law was included and organized under Berne convention 1886. Copyright law can be divided into:

- (i) Copyright law in the strict sense of the world, i.e. the protection of Intellectual Creativity and
- (ii) The law on neighboring rights. [International Bureau of WIPO, "protection of neighboring rights (rights of performers, producers of phonograms and

broadcasting organization): international conventions in the field of neighboring rights”.

7). New Bills / Acts relating to Intellectual Property :

In Dec. 1999 various bills relating to Intellectual property have been introduced in the parliament of which a few have been passed and the remaining still pending. These are -

- I. The Patent Bill (second amendment) Bill 1999, (pending).
- II. The Designs act 2000, passed by parliament but not yet brought into force.
- III. The Trade Marks act 1999, passed by parliament but not yet brought into force.
- IV. The Semiconductor Integrated circuits layout design bill 2000, pending.
- V. The Geographical indication of goods (registration and protection) act 1999 passed by the parliament but not yet brought into force.
- VI. The Protection of plant varieties and farmer's rights bill 1999, pending.
- VII. The Information Technology Act 2000, passed by the parliament but not yet brought fully into force.

I. The Patent Bill (second amendment) Bill 1999 :

Salient features :

The above bill which contains substantial changes in the Patents Act 1970, was introduced in parliament but has not yet been passed. The salient features of this bill are as follows :

- I. Creation of an appellate board to hear and decide appeals from the decision of the controller.
- II. Invention redefined to mean a new product or process involving an inventive step and capable of industrial application. Inventive step means a feature that makes the invention not obvious to a person skilled in the art.
- III. The complete specification should be accompanied by an abstract to provide technical information on the invention.

- IV. Provision for dealing with international application for patents made in accordance with the patent cooperation Treaty (PCT).
- V. An application for a patent will be examined only if a request for examination is made by the applicant or any other interested person within 48 months before the date of application failing which the application will be treated as withdrawn.
- VI. Time for putting application in order for acceptance reduced.
- VII. Section 25 Anticipation of invention can be based on knowledge, oral or otherwise, available with in any local or of indigenous community.
- VIII. Section 45 Every patent will be dated as of the date of filing the application.
- IX. Section 48 Rights of patentee.

Product Patent : Exclusive right to prohibit third parties without consent, from making, using offering for sale selling or importing for those purpose that product in India.

Process Patent : Exclusive right to prohibit third parties without consent to use the process and offering for sale or selling in India or importing for those purpose the product obtained directly by that process, provided that the product obtained in not patentable under the Act.

- X. Section B The term of every patent will twenty years from the date of filing the application.
- XI. In a suit for in fragment of a patent for a process for obtaining a new product the burden of proof, in certain circumstances, to show that the product is not made by the process used will lie on the alleged infringer. In discharging this burden the manufacturing and business secrets of the defendant will be protected.
- XII. The following mentions are not patentable :
 - a) An invention contrary to law or morality or which causes serious prejudice to human, animal or plant life or health or to the environment.

- b) Discovery of any living thing or non living using substance occurring in nature.
- c) Computer program or algorithms.
- d) Plant and animal other than micro organism in whole or any part there of including seeds. Varieties and species and essentially biological process for production or propagation of plants and animals.
- e) A literary, dramatic, musical or artistic work or any other artistic creation what so ever including cinematographic works and television production.
- f) Presentation of Information.
- g) Topography of integrated circuits.

II. Designs Act 2000 :

‘Design’ means only the feature of shape configuration, pattern ornament or composition of lines or colours applied to any article whether in two dimensional or in three dimensional or in both forms by any industrial process or means whether manual, mechanical or article appear to and are judged solely by the eye but does not include any mode or principle of constitution or any thing which is in substance a mere mechanical device. It does not include a trade mark or property mark or an artistic work. A design in order to be registerable must be new or original not previously published in India or anywhere in the world.

A design may be the shape of a was basin, a motor car, a locomotive engine or any material object, it may be the shape embodied in a sculptured or a plastic figure, which is to serve as a model for commercial production. A design not distinguishable from known designs or which consists of scandalous or obscene matter is not registerable.

In industrial design is different for a trade mark if after the expiry of the monopoly period, the design not used by other traders it might in course of time

become distinctive of the goods of the original proprietor and acquire significance as a trade mark (get-up). In such circumstances it can be protected from copying by other by a passing off action.

The Designs Act 2000 was passed by Parliament, but not yet brought into force. It has many new features. The following is a brief summary of the new provisions of the Act :-

- 1) The definition of "design" has been enhanced to include combination of lines or colours, article whether two dimensional or three dimensional or in both forms and any artistic work as defined in Cl. (C) of S.(2) of the copyright Act 1957 – S.2 (d).
- 2) The design applied for registration must not be previously published in any country and which is not contrary to public order or morality.
- 3) The application for registration of a design will be examined by an examiner in respect of the registrability of the design.
- 4) When the application is refused by the controller, the applicant may appeal against the decision of the High Court.
- 5) The design after registration will be published by the Controller in the prescribed manner.
- 6) In respect to cancellation of registration by Controller to more grounds have been added namely
 - (i). that the design is not registrable under the Act
 - (ii). that it is not a design as defined under the Act.
- 7). Penalty for piracy of a design is enhanced to a maximum of fifty thousand rupees.
- 8). The following designs are not registrable :-
 - a). A design which is not original.
 - b). A design disclosed to the public anywhere in the world by publication in tangible form or by use or in any other way prior to the filing date or priority date.

- c). A design which is not significantly distinguishable from Known design or combination of known designs.
- d). A design comprising or containing scandalous or obscene matter.

III. The Trade mark Act 1999 :

The statute law of Trade marks in India till now was governed by the Trade and Merchandise Marks Act 1958. This Act has now been replaced by the Trade Marks Act 1999 which has not yet been brought into force. There is a brief summery about the new Act of Trade Mark. :

- 1) Trade must be a mark which includes a device, brand, heading, level, ticket, name, signature, word, letter, numeral shape of goods, packaging of combinations of colours or any combination there of.
- 2) The mark must be capable of being represented graphically.
- 3) It must be capable of distinguishing the goods or services of one person from those of others.
- 4) It may include shape of goods, their packaging and combination of colours.
- 5) It must be used or proposed to be used in relation to goods or services.
- 6) The use must be for the purpose of indicating a connection in the course of Trade between the goods or services and some persons having the right as proprietor to use the mark.
- 7) The new Acts provides for the creation of an appellate Board to hear and decide all appeals from the decision of the Registrar. It also empowered to entertain original application for rectification of the registrar.

IV. The Semiconductor Integrated Circuit layout Design Bill 2000 :

The object of this Bill is to give semiconductor integrated circuits layout Designs statuary protection for ten years subject to certain condition. The term integrated circuit is not defined in the Act. But the expression layout designs and

semiconductor integrated circuit are given statutory definitions. These terms are used commonly in computer technology.

Meaning of Circuit : A combination channel or path between two devices capable of carrying electrical current. Also used to describe a set of components connected together to perform a special task.

Integrated Circuit : A small semiconductor circuit that contains many electric components. An electronic assembly that contains many hundreds, if not thousand hundreds of thousand electric components. "Semiconductor Integrated circuit" means product having transistors and other circuitry elements which are inseparably formed on a semi conductor material or an insulating material or inside the semiconductor material and designed to perform an electric circuitry function.

Prohibition of registration of designs : -

A layout design or Semi-conductor Integrated circuit

- a) Which is not original
- b) Which has been commercially exploited anywhere in India or in a convention country.
- c) Which has not inherently distinctive.
- d) Which is not capable of being distinguishable from any other registered layout design shall not be registered as a layout design.

Procedure for Registration : Any person claiming to be the creator of a layout design may apply to the registrar of semi-conductor integrated circuit layout design for registration in the prescribed form.

The procedure for application, consideration by the registrar, advertisement of application opposition to registration and other incidental requirements in connection with the above closely resemble the corresponding provisions under the Trade marks Act 1999.

V. The Geographical indication of Goods (Registration and protection) Act 1999:

In the Geographical indication of Goods Act is a new concept of geographical names free from the concept of distinctiveness is introduced. In this Act, geographical indication is defined as an indication used to identify the goods, whether natural or manufactured goods emanating from a particular area or territory known for particular quality or characteristics of the goods. Such geographical names is used by any person in relation to goods originating from entirely different place is likely to cause confusion or deception. The geographical Indication of Goods Act is designed to protect the use of such Geographical Indication from infringement by others and protect the consumers from confusion and deception through the process of registration of such indication by law.

Procedure of registration etc : The procedure for registration, renewal, removal and restoration are exactly same as those for a trade mark registration under the Trade marks Act, 1999.

Protection of Marks registered under the Trade Marks Act : Geographical indication is not registrable as trade mark under the Trade Marks Act 1999. However, trade marks consisting of geographical indication already registered before the commencement of this Act or before the date of filing the application for registration under this Act are protected.

Appeals : Appeals from the decision of the Registrar of the geographical indication will lie the Appellate Board Constituted under the Trade Marks Act, 1999.

Offence & Penalties : The provision relating to offences and penalties under this Act are similar to those under the Trade Marks Act 1999.

The other provision of this Act relating to powers of registrar, filing of suit for infringement or passing off and relief's in such suits are the same as the corresponding provisions under the Trade Marks Act 1999.

Prohibition of Registration : The following geographical indications are prohibited from registration an indications –

- a) The use of which would be likely to deceive or cause confusion or
- b) The use of which would be contrary to any law for the time being in force.
- c) Which comprises or contains scandalous or obscene matter.
- d) Which comprises or contains any matter likely to hurt the religious susceptibilities of any class or section of the citizen of India.
- e) Which would otherwise be disentitled to protection in a court.
- f) Which are determined to be generic names or indications of goods in a country and are therefore not or ceased to be protected in that country of origin or which have fallen into disuse in that country.
- g) Which although literally true as to the territory, region or locality in which the goods originate, but falsely represented to the persons that the goods originate in another country, region or locality as the case may be.

Examples of geographical indication : Basmati rice, Banaras Silk, Kancheepuram Silk, Champagne Scotch, Whisky and Swiss Chocolates are some well known geographical indications.

VI.. The protection of plant varieties are farmer's Right Bill 1999 :

In view of the ever increasing population all over the world, the necessity for increasing agricultural production has become very important. This can be made possible only by creating new varieties of plants which will produce qualitatively and quantitatively higher yields of all varieties creations of such varieties has become possible by scientific research which involves expenditure of money labours and Intellectual effort. To encourage, scientific research and create incentive for producing

new plant varieties the persons or organizations which produce such varieties should be rewarded either by granting them patent rights by an effective Sui generic system. This will be in conformity with the TRIPS agreement. This is the genesis of the above noted Bill.

The bill provide for registration of new plant varieties satisfying certain criteria in the name of a person claiming to be the breeder of the variety having a particular denomination. Registration gives an exclusive right to the breeder to produce sell, market, distribute, import or export the varieties of three year which may be renewed at a time for three years. This right may be extended to a maximum period of eighteen years by periodical renewals from the date of registration in respect of trees and rivers and fifteen years in respect of extant variety and others from the date of registration.

The creation of new plant varieties and their use for agricultural production is a matter of great public interest. In order to implement the provisions of the bill when passed into Act, provision is made for the establishment of an authority a plant varieties registry manned by a registrar general and number of registrars when their respective power and duties specified. This organizational set up will be under the general control of the Central government.

Person who can apply for Registration :

- a) Any person claiming to be the breeder of the variety or
- b) Any successor of the breeder of the variety or
- c) Any assignee of the breeder of the variety in respect of the right to make such application may make an application for registration.

Prohibition of Registration : A new variety will not be registered if the denomination given to such variety –

- I. Is not capable of identifying such variety.
- II. Consists solely of figures or

- III. Is liable to mislead or liable to cause confusion concerning the characteristics, value or identity of such variety or the identity of breeder of such variety.
- IV. Is not different from every denomination which designates a variety of the same botanical species or of a closely related species registered or
- V. Is likely to deceive the public or cause confusion in the public regarding the identity of such variety.
- VI. Is comprised of any matter likely to hurt the religious sentiments respectively of any class or section of the citizens of India.
- VII. Is comprised of scandalous or obscene matter.
- VIII. Is prohibited as a name under the Emblems and Names (Prevention of improper use) Act 1950 or
- IX. Comprised of solely or partly of geographical name provided that the use in respect of such variety is an honest use.

Infringement, Suit, Relief's, Offences and Penalties : Any person without authorization of the registered breeder has the exclusive right commits an infringement of the breeder's rights. A suit for infringement can be instituted in a District Court. The relief's available are an injunction and either damages or an account of profits.

The unauthorized use of the denomination of the registered variety is also an offence punishable with imprisonment and fine.

The Bill also provides for various matter madental to the implementation of the provisions contained in the Bill and the administration of the organizational setup for implementation.

VII. The Information Technology Act, 2000 :

New communication system and digital technology have made dramatic changes in the way we live. A revolution is occurring in the way people transact

business. Business and consumers are increasingly using computers to create, transmit and store information in the electronic form instead of traditional paper documents. Information stored in electronic form has many advantages. It is cheaper, easier to store, retrieve and speedier to communicate. Although people are aware of these advantages they are reluctant to conduct business or conclude any transaction in the electronic form of due to lack of appropriate legal framework. The two principal hurdles which stand in the way of facilitating electronic commerce and electronic governance are the requirements as to writing and signature for legal recognition. At present many legal provision assume the existence of paper based records and oral testimony. Since, electronic Commerce eliminates the need for paper based transactions, hence to facilitate e-commerce the need for legal changes have become an urgent necessity. International trade through the medium of e-commerce is growing up rapidly in the past few years and many countries have switched other from traditional paper based commerce to e-commerce.

The information technology act 2000 has been designed in the model law adopted by the United Nations commissions on international trade law (UNCITRAL).

Authentication of documents : The act deal with authentication of electronic records by affixing his digital signature. The authentication of the electronic record will be effected by the use of asymmetric cryptosystem and Hash function which envelop and transform the initial electronic record into another electronic record.

Hash function means an algorithm mapping or translation of one sequence of bits into another generally smallness set known as Hash result such that an electronic record yields the same Hash result every time the algorithm is executed with the same electronic record as its input making computationally infeasible:

- a) To derive or reconstruct the original electronic record from the Hash result produced by the algorithm.
- b) That two electronic records can produce the same Hash result using the algorithm.

Any person by the one of a public key of the subscriber can verify the electronic record.

The private key and the public key are unique to the subscriber and constituting a functioning key pair. Key pair in an asymmetric cryptosystem means a private key and the mathematically related public key. Which are so related that the public key can verify the digital signature created by the private key.

Electronic Governance : The acts provide for legal recognition of electronic records and digital signature. It permits the use of electronic records and digital signature in govt. and its agencies. Documents which have to be retained for any specific period may be retained in the electronic form.

Rules, regulations etc will be published in the official gazette or electronic gazette. There is no compulsion to accept any document in electronic form.

The central govt. has power to make rules in respect of digital signature. The act provides for attribution, acknowledgement and dispatch of electronic records and the time and place of dispatch and dispatch of electronic records.

The acts provides for security of electronic records and of digital signature.

Implementation of the provisions of the Act : to implementation the provisions of the act the central govt. will appoint a controller of certifying authorities and sufficient number of deputy controllers and assistant controllers.

The functions of the controller are specified in the act.

There is provision for recognizing foreign certifying authority as a certifying authority under the act. The controller can issued to any person licence to issue digital signature certification by following the procedure laid down in the Act. The Act also

provides renewal of the licence, procedure for grant or rejection of licence and suspension or revocation of licence.

The certification authority should follow the procedure laid down by the Act and ensure the compliance of the Act etc. it should disclose, its digital signature certificate, and any certification practice statement notice of revocation or suspension of its certifying authority certificate, if any, other fact materially and adversely affecting the reliability of a digital signature certificate which the authority has issued or the authority ability to perform its services.

Digital Signature Certificate : Digital signature certificate will be issued by the certifying authority by following the procedure prescribed by Central Govt. for the purpose. There is provision for suspension of digital signature certification and also for revocation of digital signature certification in certain circumstances.

Duties of Subscriber : A subscriber means a person in whose name the digital signature certificate issued. The Act has imposed certain duties on him. The subscriber, inter alia should retain control of the private key corresponding to the public key listed in the digital signature certificate.

Penalties and adjudication : If any person without authority accesses any computer or computer system or computer networks downloads copies of extracts, information introduces any computer contaminant or virus damages my computer system or computer data or programme etc. he will be liable to pay rupees not exceeding one crore of rupees to the person affected. Failure to furnish information, records etc by a person who is required by the Act or Rules to furnish the send material is punishable with a penalty not exceeding ten thousand rupees for everyday during which the failure continues.

The Central Govt. will appoint suitable persons to adjudicate matters relating to any contravention of all provision of the Act or the Rules formed there under.

Cyber Regulations Appellate Tribunal : The Central Govt. will establish Appellate tribunals to deal with appeals from any person aggrieved by any order of the controller or adjudicating officer. An appeal from the decision of this tribunal will lie to the High Court.

Offences and Penalties : Tempering with computer source documents hacking with computer systems publishing of Information which is obscene under the in electric form, all offences under the Act and punishable with imprisonment and fine.

Penalties of imprisonment and fine : Penalty of imprisonment and fine is also provided for mis presentation, breach of confidentiality and privacy, publishing of digital signature certificate false in certain particulars, publication etc. of a digital signature certificate for fraudulent purpose.

Network service provided and offences : Network service providers are not liable under the Act and rules and regulations for any third party information or data made available by him if he proves that the offence or contribution was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence to prevent contravention.

Power of Police officer, to enter search etc : Certain Police officers have been given the power to enter any public place and search and arrest without any warrant any person, found therein who is reasonably suspected or having committed or of committing any offence under the Act.

Cyber Regulation Advisory Committee : The Central Govt. will constitute a Cyber Regulations Advisory Committee to advise the Central Govt. as regards any rules or any other purpose connected with Act. The controller may after consultation with Act. The controller may after consultation with this committee and with the approval of Central Govt. make regulation constituent with the Act and the rules made there under.

8. Intellectual Property Rights : Changing Scenario :

Sophisticated methods of commission of different crimes adopted by the criminals in every branch of criminal law have not left the field of Intellectual property rights (IPR's) untouched, cracking of websites, hacking of Internet demolishing of security, use of common trade names as domain name without permission from there owners is done regularly and unscrupulously by highly trained professional in order to make unlawful economic gains at the expense of Intellectual property rights of others.

Cyber Crimes and IPR's :

Seeing in retrospective problem of infringement of Intellectual property rights was not very acute because there were no photocopies, no computers, no Internet. Now the canvass has changed, the million is different. The highly complex information technology advancements and cybernetics with application of sophisticated tools have provided handle to intelligent criminals to commit cyber crimes at times to make quick gains and at time merely for the heck of it. These crimes are much head of the traditional concepts of crime the domain of trade marks and patents.

Infringement of Trade Marks through Domain Name :

Registration of domain names on the Internet is done on the first come first saved basis without any direct governmental control. Mostly registration of domain names is done by private organizations with out any territorial limits and without any prior checks of earlier trade marks registered under municipal law of different countries. Registration of trade marks is governed by the Trade Marks Act, 1999. lot of heat has been generated by this controversy in the copyright Act, 1957 and Trade Marks Act, 1999 provides for criminal liability but sanctions are highly deficient and ineffective.

Major drawback in these statutes is that violation of intellectual property rights (IPR's) is normally not treated as criminal Act. Wherever they do, stress is on means area is one of the essential ingredient of such offences. It will not be out of place to mention that the patents Act, 1970 and the Designs Act, 2000 provide merely for civil liability.

There is trail of court cases regarding infringement of trade marks through domain name registration in UK, Italy, Spain, and France and in other countries.

Depending on the nature of the infringements in the absence of any standard terminology, these violations have been called by various names like cyber-squatting, name grabbing, passing off etc. in India, when a website called <http://marksandspencer.co.uk> came up marks and Spencer, a private limited company had to seek judicial remedy against 'One in a Million' a British company for an injunction order. It was held that the name and spencer could not have been chosen for any other reason except that it was a well reputed brand name associated with a well known company. In another case, it was held that the internet domain names are of importance and can be valuable corporate asset and that a domain name is more than an internet address. A company carrying on business through the Internet, carried a domain name "REDIFF" which had been widely published. The defendant company also started using the same domain name transcribing it as "REDIFF". It was found that the only object is adopting this domain name was to trade upon the reputation of the plaintiffs domain name. an injunction was ordered against the defendant in use of the said name.

Global Enormity of the problem :

Trade marks of reputed concerns as also names of well known personalities were being registered as domain names. Situation had become alarming even the US Govt. had to issue a white paper as a policy statement on management of Internet

names and address. International support was sought. As a consequence, the Internet society, incorporated in the US (ISOC) took initiative and Internet Assigned Number Authority (IANA) also joined which led to the establishment of International Adhoc Committee (IAHC).

The International Adhoc committee which is an International multi organization body is specifying and implementing policies, process and procedures concerning top level domain names. Membership of the IAHC is highly broad based and even companies administrating Top Level Domains name (TLD's), developing internet technology and products and providing Internet services are also its members. The main steps taken by the authority, which works under the charter include –

- I. Internet trade market domain name spaces to be created.
- II. User friendly directories to got published and LKHC report to be implemented.

The Intellectual property right in the global context have been protected and regulated through various International efforts like World Trade Organization (WTO) World Intellectual Property Organization (WIPO) and Agreements on Trade Related aspect of Intellectual Property rights (TRIP's). In brief, TRIP's Agreement has involved certain standardized norms regarding Intellectual property rights and also prescribed uniform procedures for satisfying states to implement through their national laws. India being a signatory of such Agreements is obliged under Article 253 of the Indian constitution to implement the same through appropriate national laws. Earlier, the foreign parties (Recommendation and Enforcement) Act, 1961 has been enacted to provide for the enforcement of arbitration awards involving foreign parties. The merit of the TRIP's Agreement is that it seeks to universalize the Intellectual property rights and to bring about procedures without undermining the national legal systems. Thus such agreements enable the member states to meet the challenges of cyber crimes against intellectual property rights. Needless to add that member states have yet to respond to the initiative through appropriate legislation.

Internet service Provides (ISPs) :

An other area of serious conflict is position of Internet Service Providers (ISPs) in making various encroachments on intellectual property rights of others. The question is whether the ISPs are merely carriers acting as postmen in Canman Parlance or they are publishers. If they are in the former category, no liability can be fastened on them, if they are in the latter category, they are liable for violation of IPRs as any other publisher is. The law is also fast developing on the count.

Search for Remedies :

Municipal laws in member states are attuning them selves to the changed scenario. How ever, the approach has not been wholes one, rather it has been fragmentary and of cosmetiz value. No long term planning or state has been thought of global scene is no better. The approach has been peace meal. Orientation of trade and commerce has been blurring the visions in formulating in comprehensive global plan to combat crimes against intellectual property rights. There is need t identify and fix the definitive domain of such crimes. Half heated approach on this front is likely to prove counter productive, it may even boomerang.

9. Technological Challenges to Intellectual Property Rights (IPRs) :

Intellectual property rights are constantly destabilized by technological advance. Patent law, evolving primarily around machines and chemical processes, has had to absorb the emergence of electrical Engineering, microbiological production techniques and now biotechnology. Copyright, initially a rather belated response to the printing press, had then to address the performance of plays and music, photography, sound recording film, broad easting and now the extraordinary prospects of digital recording and transmission.

As the pre history of copyright makes plain, the demand for new forms of protection is dependent upon many factors including the expansion and liberation of an economy to a point where new entrants to a market can no longer be excluded by local cartels in the form of guilds and corporations. When the London stationers found in the later seventeenth century that they could no longer control, they were obliged to press their author's case for a copyright in what they published and they produced by improvements in typesets which cheapened the cost of imitation and improvements in transportation, which made it possible to ship copies in to the capital from around the kingdom.

In other words, it is not the initial technology so much as the technology of initiation which stimulates the strongest demands for intellectual property. The early computer industry was content with contract and secrecy as the legal weapons of its development, but the opening of mass markets made possible by micro-computer technology and its astonishing ability to copy programs, rapidly reversed such perceptions. The greater the differential between initial development costs and those of easy and accurate initiation, the more exigent the case for legal protection becomes.

Intellectual property rights are the result of idealistic and utilitarian perceptions. In some traditions, aesthetic and cultural values are held to justify these rights (or some of them-particularly the rights of authors, performers and inventors) quite apart from any role which they may have as incentives to production and so to economic expansion and enhanced consumer choice. These non-economic values also express the wrongness of allowing one person to takeover and reap rewards from the intellectual or the marketing efforts of another.

Today's great advances in computing, telecommunications, biotechnology and so on require very considerable investment indeed in order to be made, but are often taken over by others quickly, efficiently and cheaply. This makes the case for some intellectual property protection very hard to resist. It explains why in the 1950's the copyright system was roughly manipulated so as to provide a degree of protection for

computer programmes and why semi-conductor layouts acquired their own form of rights. It explains why there is currently a strong drive to protect database compilations, multimedia, new forms of electronic distribution and even DNA structures whether uncovered in a natural state or varied by genetic engineering. Now, as perhaps never before, policy makers are having to react to demands for new or adapted protection before there is real time to contemplate desirable conditions and qualifications. as the sleigh carriers forward, one can only look anxiously for the restraining hands on the reins.

10. Evolution of the IPRs :

The evolution of the concept of Intellectual Property Rights at international level started during the last quarter of the 19th century. (Some land marks in the world IPR scene is given in Annexure – I). They are :

i). Paris convention, 1883 (revised 1967) :

Paris convention was the first international convention on Intellectual property Rights guaranteeing the protection of industrial intellectual property. Signed by the member countries on March, 20, 1883. The convention was later on revised on July 14, 1967 at Stockholm. at present, it has 139 member countries. The convention protects patents, trademarks, service marks, trade names, utility models and industrial design. Besides these, it also protects the indication of source or appellation of origin and provides for the repression of unfair competition. The convention permits non-exclusive compulsory license if a patent is not working. In other words, if a patentee does not industrially use his / her patent, the govt. may grant another person the right to use such patent without such patentee's permission and / or consent and without compensating such patentee.

ii). Berne Convention, 1886 :

Berne convention for protection of literary and artistic works, 1886 was entered into to protect the non-industrial Intellectual property rights such as copyrights relating to literary and artistic works. It was revised on July 24, 1971. Berne convention is signed by 119 countries and it is based on the principals of discrimination and national treatment.

iii). Madrid Agreement, 1891 :

Madrid Agreement, 1891 calls for the international registration of trademarks thereby allowing imported goods bearing a false origin indicating to be seized on importation. According to this agreements an applicant who has registered a trademark in his home or business country has to get a international registration with an international office, i.e. WIPO. The trade mark then to be registered in other member states that are designated unless a state raises an objection under its normal law with 12 month.

iv). Universal Copyright Convention, 1952 :

This is another treaty on copyright accommodating US statutory requirements and is based upon the principals of non-discrimination and national treatment. The treaty has been signed by 57 countries and is administered by UNESCO.

v). Lisbon Agreement, 1958 :

With a 17 countries membership, Lisbon Agreement was entered into in 1958 and provides protection to appellation of origin. The agreement is administered by WIPO.

vi). Rome Convention, 1961 :

International convention for protection of performers, producer of phonograms and broadcasting organization, 1961 known as Rome convention was signed by 47 countries. It provides protection for the neighboring rights in relation to performers, producers of phonograms and broadcasting organization. The convention is administered by WIPO, ILO, and UNESCO.

vii). Geneva Convention, 1971 :

Genera convention 1971, provides protection to producers of phonograms against the making of duplicates of their phonograms in another country. It has 52 country memberships and is administered by WIPO, ILO, and UNESCO.

viii). IPIC Treaty, 1989 :

IPIC treaty, 1989 protects the intellectual property in respect of integrated circuits. There are eight countries as its initial signatories and it is still open for membership.

ix). WIPO, 1967 :

World intellectual property organization was established by a convention signed at Stockholm on July 14, 1967 entitled. "Convention establishing the world intellectual property organization". It succeeded united international Bureau for protection of Intellectual Property which was founded in 1893. At present, it is administering nine various conventions. The main objectives of WIPO are:

(i) To promote protection of Intellectual Property throughout the world through co-operation among states and where appropriate, in collaboration with other International Organizations such as ILO & UNESCO.

(ii) To ensure administrative co-operation among the Intellectual Property unions.

WIPO is significantly co-operating with developing countries in their efforts for development of Intellectual Property, WIPO has still not lost its relevance even after TRIP'S Agreement.

x). TRIP'S Agreement :

The agreement on Trade Related aspects of Intellectual Property Rights (TRIPS) agreement, which is binding on all WTO members, came into force on January 1, 1995. The TRIPS agreement makes protection of intellectual property rights on integral part of the multilateral trading system are embodied in the WTO.

TRIPS is the new agreement on IPR'S in WTO region signed at Marrakesh on 1 January, 1995, Unlike the earlier conventions for ten first time trade is linked with Intellectual property rights.

TRIP'S agreement which came into effect on 1st Jan, 1995 is to date the most comprehensive multilateral agreement on Intellectual property.

The area of Intellectual property that it covers are; copy right and related rights (i.e the rights of performers producers of sound recordings and broadcasting organization) trademarks including service marks, geographical indications including appellation of origin, industrial designs, patent including the protection of new varieties of plant, the layout designs of integrated circuits, and undisclosed Information including trade secrete and test data.

TRIP'S Agreement requires each member's state to apply minimum standard of protection for Intellectual property which, in general, exceed the standards set by Berne and Paris conventions and other principal International agreements on the subject. TRIPS agreement also sets requirements for enforcement of this protection and as part of the WTO package, is equipped with binding dispute settlement procedures. The agreement constitutes a complex legal system provisions of which are as yet almost untested and which for the trade policy officials who operate the other elements of the WTO system, is largely unfamiliar territory.

xi). The General Agreement on Tariff's and Trade (GATT) :

GATT originated after World War II (1939-45). The Agreement was originally a part of a draft chapter for an International Trade Organization) (ITO). The "Havana chapter" of the ITO contained the GATT, which on governed trade and also wide ranging rules relating to employment, commodity agreements, restrictive business practices, International investment and services. GATT was signed by 23 National at a Trade Conference in 1947 and become effective in January 1948. The 1994 GATT treaty was one of the most ambitious agreements to be signed by such a large number states to 1994 GATT Agreement eventually transferred membership to the WTO.

xii). Biodiversity convention :

The convention which was proposed in 1992 at the Rio Earth Summit, has been ratified by more than 169 countries. Among its key features are :

- 1) The conservation and sustainable use of different components of bio diversity.
- 2) Fair and equitable sharing of benefits arising out of the utilization of genetics recourses.

xiii). European Patent Convention (EAPC) :

It was formed by the members of the Common Wealth of independent states (CIS) on August 12, 1995 at Moscow. For patenting in all member states of EAPC, an inventor need to file only one patent application with a single payment. The official to file system. The term of patent is 20 years.

xiv). The organization Africaine de la Propriete Intellectuelle (OAPI) :

It was formed in 1958 by the twelve former French overseas Territories that gained independence. A single patent granted by OAPI from any of its regional offices became separately effective in all the member states. However, when a member states revokes a patent in its territory, it remains effective in the other member states.

xv). Locarno Agreement :

The locarno Agreement establishing an International classification for Industrial Design concluded in 1968 and then it was amended in 1979. the Agreement establish a classification for Industrial design. It also comprises an alphabetical list of goods with an indication of the classes and subclasses into which these goods fall.

xvi). Nairobi Treaty :

The Nairobi treaty on the protection of the Olympic symbol came into existence in 1981. The treaty is open to any state member of WIPO the Paris union, the United Nations or any of the specialized agencies brought into relationship with the United Nations. All states which are obligation to protect the Olympic – five interlaced ring against use of commercial purpose with out the authorization of the International Olympic Committee. The treaty also provides that, whenever a license fee is paid to the International Olympic committee for its authorization to use the

Olympic symbol for commercial purpose, part of the revenue must go to the interested nation Olympic committee. India is a sign among to the Nairobi treaty.

xvii). Nice Agreement :

The nice agreement concerning the international classification of goods and services for the purposes of the registration of marks calculated on June 15, 1957. The agreement entered into force on April 8, 1961 countries party to the nice agreement are required to include in the official documents and publication concerning the registration of marks which the numbers of the classes of the classification which the goods or services for which the mark is registered belongs.

xviii). North American Free Trade Agreement (NAFTA) :

It is an agreement between three countries namely the USA, Canada and Mexico. Agreement came into force in January 1994 with the objective of harmonizing the Intellectual property rights in the member states by providing a framework for efficient utilisation of resources through trade liberalization.

xix). Strasbourg Agreement :

The agreement established the international patent classification (IPC) which divides technology into eight section with approx, 67,000 sub-divisions. The appropriate symbols are allotted by the national or regional industrial property office that publishes the patent document. Every year over 1,000,000 appropriate symbols are issued.

xx). Vienna Agreement :

The agreement established a classification for marks which consist of or contain figurative elements. The classification consists of 29 categories, 144 divisions

xxv). The African Intellectual Property Organization (ARIPO) :

This was created under the Lusaka Agreement on Dec. 7, 1976. It consists of the English speaking African nations. The ARIPO is mainly concerned with pre-patent grant proceedings on behalf of the member states. Once the patent is granted it comes under the Jurisdiction of the national laws of each of the member states.

xxvi). The Patent Cooperation Treaty (PCT) :

PCT come into force on Jan. 14, 1978. it becomes operational with 18 contracting states on June 1, 1978. the treaty speaks to simplify the filling and processing of patent application world wide. PCT becomes relevant only. When one is interested in filling patent applications in several countries. As on March 23, 2003 there were 108 contracting states party to the PCT. India joined the PCT with effect from Dec. 7, 1998.

xxvii). The Hague Agreement Concerning the International deposit of Industrial Designs :

It was adopted within the framework of Paris Convention on Nov. 6, 1925. the agreement entered into force on June 1, 1928 its main aim is to enable protection to be obtained for one or more industrial designs in a number of states through a single deposit filed with the international Bureau of WIPO.

xxviii). The Treaty on International Registration of Audio-visual Works (Geneva) :

This treaty was held on April 20, 1989 genera and brought into force in 1992. The treaty is primarily concerned with the registration of audio-visual works at the international level.

Annexure I

Some Landmarks in the World IPR Scene

- ⇒ Paris Convention 1883 (to facilitate protection of industrial property); revised several times – in 1900 at Brussels, in 1911 at Washington, in 1925 at Stockholm, the last amendment in 1979. India became a member of the Paris Convention on Dec. 07, 1998.
- ⇒ Berne Convention, 1886 (for the protection of literary and artistic work); revised from time to time in 1896, 1908, 1928, 1948, 1967, 1971 and amended in 1979 (for protection of artistic works).
- ⇒ Hague Agreement, 1925, (concerning the international deposit of industrial designs). This agreement is now² being implemented by the WIPO.
- ⇒ Universal Copyright Convention (UCC), under the auspices of UNESCO, 1952. (came into force from 16 Sep., 1955), revised at Paris in 1971.
- ⇒ The Rome Convention 1961; International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations.
- ⇒ Budapest Treaty, 1973 (for deposition of microorganisms), amended in 1980. India became a member of this treaty w.e.f. Dec. 17, 2001.
- ⇒ Patent Cooperation treaty (PCT), 1978. India joined the PCT on Dec. 07, 1998,. (World Intellectual Property Organization – WIPO, Geneva coordinates the activities of the PCT.)
- ⇒ Madrid Agreement, 1991. (for repression of false or deceptive indications of source of goods). The agreement covers both trademark and service marks.
- ⇒ WTO – TRIPS Agreement, 1994 onwards.

11). IPRs Law in India :

In India, the Intellectual Property Rights (IPRs) of computer software is covered! @!@ under the copyright law. Accordingly, the copyright of computer software is protected under the provisions of Indian Copyright Act, 1957. Major changes to Indian copyright law were introduced in June 1994. This has made the Indian copyright law, one of the toughest in the world. The amendments to the

copyright act in June 1994, clearly explains the rights of copyright holder, position on rentals of software, the rights of the user to make backup copies and the heavy punishment and fines on infringement of copyright of software.

According to section 14 of the copyright act, it is illegal to make or distribute copies of copyrighted software without proper or specific authorization. The only exception is provided by section 52 of the act which allows a backup copy purely as a temporary protection against loss, distribution or damage to the original copy.

The 1994 amendment to the copyright act also prohibits the sale or to give on hire, or offer for sale or hire, any copy of the computer program without specific authorization of the copyright holder.

Software creates unique problem because it is so easy to duplicate and the copy is usually as good as the original (although many a times plagued with computer virus). This fact, that the copy is as good as original however, does not legitimate piracy the copyright law makes no distinction between duplicating software for sales or for free distribution.

Indian law prohibits unauthorized duplication of software, making multiple copies for use by different user within an organization, and giving an unauthorized copy to another individual. If caught with pirated software, the copyright infringer may be tried under both civil and criminal law. IPR's in India, administered by MHRD (Annexure) – II).

Annexure II

Administration of IPRs in India

Forms of IPRs	Legislation Covering IPRs in India	Administered by
i) Patents	i) The Indian Patents Act, 1970 (Last amended in March 1999).	i) To iii) Controller General of Patents, designs, and trademark under the control of the Deptt. of industrial Policy and promotion, Ministry of Commerce and Industry.
ii) Designs	ii) The Design Act, 1911 (A new Design Act, 2000 has been enacted superseding the design Act, 1911; enforcement pending.	
iii) Trade marks	iii) The Trade and Merchandise Mark Act, 1958 (A new Trademark Act, 1999, has been enacted superseding the earlier Trade and Merchandise Act, 1958; enforcement pending)	
iv) Copyright	iv) The copyright Act 1957 (Last amended in 1999) and the Copyright Rules, 1958.	iv) Ministry of Human Resource Development
v) IC Layout Design	v) The Semiconductor Integrated Circuit Layout Designs Act, 2000 (enforcement pending).	vi) Ministry of Communication and Information technology
vi) Geographical indicators	vi) The Geographical Indication of the Goods (Registration and protection) Act 1999. (enforcement pending).	vii) & vii) Ministry of Commerce and Industry.
vii) Know-how/ Undisclosed information.	vii) No exclusive legislation exists but the matter would be generally covered under the Contract Act, 1872.	

A civil and criminal action may be instituted for injunction, actual damages (including infringer's profit), or statutory damages per infringements etc. More ever, with the amendments to Indian Copyright Act in 1994, even the criminal penalties have substantially increased. According to section 63 B, now there is a minimum jail

term of 7 days for copyright infringement. The act further provides for fines up to Rs. 2, 00,000 and jail term up to three years or both.

The Indian government has been an active participant in protecting the rights of copyright holder. Both department of electronics and ministry of human resource development have actively helped in bringing amendments to the Indian Copyright Act. These agencies are now helping to enforce the law. Today, officers of these government agencies, NASSCOM officials, police and various other law enforcement officers of government of India are committed to enforce copyright laws and eradicate the menace of software piracy. Raids jointly facilitated by NASSCOM and business software Alliance with active cooperation from law enforcing authorities over last one year at some of the major metro cities have already had salutary effect.

NASSCOM has launched many initiatives to deter discourage piracy over the past few years. Some of these are

- Lobbying with the government for reduction of Import duty on software to 10%.
- Extensive Media campaign against piracy.
- Software Management Seminars for EDP managers at metro cities.
- Strict implementation of Code of conduct for member companies of NASSCOM.
- Awareness and training of police officers and law enforcement authorities.
- Distribution of brochures explaining about "Software Piracy and the law".
- Anti piracy Billboards, stickers etc.

It is generally agreed that one of the most important factors in legalization a market is providing public access to information. NASSCOM has established a special anti-piracy (Hotline) telephone number (011 6114971) at New Delhi. It provides the following services:-

- It provides the caller all possible information on sources and retail outlets, wherein the caller can purchase legal copy (ies) of particular software.

- The hotline provides information on various aspects of Copyright Act in India.
- It provides the caller, information on legal use of software.
- It receives information on suspected incidents of software piracy. This information is passed on to the affected/concerned member company.
- The callers can also book an EDP Audit Kit on the hotline.

In a 20 month period since the launching of anti-piracy Hotline on 12 August 1994, more than 10,000 calls have been received at NASSCOM. An analysis of these calls is very interesting:-

- 32% callers sought information about sources to obtain legal software.
- 41% calls related to suspected cases of software piracy.
- 10% callers sought information on registration process of copyrighting software.
- 2% callers sought information on legal use of software in India.
- 5% were miscellaneous calls.

During 1996, NASSCOM is setting up Anti-Piracy Hotlines at Mumbai (Bombay), Bangalore and Madras.

CHAPTER: THREE

EMERGANCE OF ELECTRONIC PUBLICATION: ISSUES AND TRENDS

INTRODUCTION

The world is passing through a revolution in Information technology which has far reaching impacts. This is the age of 'Publication Explosion'. Every day billions and billions of publications are coming out containing in calculable information resulting in 'Information Explosion'. Publications of the network society are appearing with mixed digital media and increasingly in a completely electronic format. The Internet has existed for years and has been utilized by the research community for a variety of purposes with little dramatic publishing could potentially and drastically alter the dynamic among authors, publishers and consumers of scholarly works. Electronic publishing may offer the various 'stakeholders' contractual alternatives that could satisfy their respective needs with fewer problems than the dynamic under copy right law.

It is the invention of printing with movable metal type faces in the 15th century that led to the emergence of publishing as an independent and sustainable economic activity, with Industrial Revolution, paper becomes the medium of literary works, but still it was as manuscripts they remained. Gutenberg's invention of printing press in 1455 led to the emergence of the printing and publishing industry. Once the plate is ready one can make any number of copies meant reduced cost of production because of economy of scale.

This new formed convenience as a result of the technological innovation made enterprising people to bring out copies of popular works already published by author. This caused a major economic challenges to the original publisher who invested his money and effort in bringing out the first edition in untested waters. In order to the safe ground the interest of the those who has invested their time and money in printing an edition of a book, the earliest copyright laws were enacted. This technological challenges lead to the legal response of the government in the form of copyright law.

Over the year's copyright law under went a number of changes, not a small number of which were responses to technological advancements. The changes were made to adopt it to face the challenges posed by photography, sound recording and cinematographic technologies in the early part of last century and to technologies that facilitated name copying of sound and radio records in the latter half of that century, in response to social and economic development, the period of copyright protection also steadily got extended from original seven years in the earliest copyright laws in England to the present life term plus seventy years in U.K. and life plus sixty years in India.

The technological development that has caused the greatest challenge to publishing industry is the emergence of the digital technologies in the nineties. Apart from the possibilities that this new technology has opened up for individuals in copying and manipulation of works, it has spawned a new kind of publishing, that is, e-publishing and a new kind of work, that is, multi media work, both of these have raised a multitude of challenges to the copyright regimes in India and in other countries.

1). Historical Background :

The history of e-journals began with the full text databases offered by traditional on line vendors like dialog during late 80's. This full text was a misnomer and was really not complete text. What they offered was bare ASCII files of the journals and magazines which stripped off the diagrams, photographs, graphs and other images objects of the article. The technology of the day then made it difficult to offer the complete text as the storage costs were still expensive the bond-width then at 2.4 kbps to 4.8 kbps was simply inadequate and the access interface was non-graphical. However, the full text was presented as a searchable text. CD-ROM's and the development in compression technology made it possible to record and deliver complete text of the journal as image file. They were the image replicas of the printed pages. But the text was not searchable. A searchable bibliographic database of the

table of contents provide the link of the corresponding image files of the articles on the CD-ROM's. These images, in spite of enormous compression, occupied a large volume of space. Although, a CD-ROM could store 200,000 plus pages of ASCII text, it could store not more than 10,000 pages of a scanned image, scanned as resolution of 150 dps. Being an image file, it was searchable. This was the pre GUI and pre windows day.

During the early 1990's, on line vendors used the CD-ROM' technology and the FAX technology to deliver almost instantly the complete text, through a technological integration of online bibliographic databases with a CD-ROM collection of image files residing in a network of jukeboxes. It was like online ordering for articles found during a bibliographic search, to be delivered by fax with in a span of 15 - 30 minutes. In this process, for the first time the bibliographic database, document collection in electric format and the document delivery activity were integrated through different pieces of technology. The application of this technological integration found its way primarily for delivering patent delivery. Curiously, this application did not found its document delivery for journals, probably due to copyright issues which publisher would always like to jealously guard. UMI now called Beu & Howel. Information and learning (BHEL) successfully promoted this technology model for journal and offered a LAN based solution with its image files of full text CD-ROM databases for journals in the area of management, medical and social sciences, similar LAN based models were supported by other aggregators of electronic journals on CD-ROM like ADONIS and IEEE.

With the emergence of Internet and the web during mid 90's, the full text database started including image object like photographs and charts as link object, which could be zoomed, or, an icon with act as a link. The text was searchable

The e-journal we see today is a transformation of this Internet version, which is generally a PPF image and an exact look a like of the print with the text as a searchable file. While PPF is the preferred format for e-journals by a number of

leading publishers and the libraries, a large number of publishers and third party aggregators, offer e-journals in a variety of other formats, like HTML, SGML, etc. E-journal in the latter formats is not exact look alike of the mats although they offer complete text of the journal with graphic objects in the articles as embedded images.

Bibliographic databases, journals and document delivery are the three information resources. Components of information access and delivery mechanisms. With the emergence of e-journals, these three components are likely to submerge, integrating all the three components through a common interface technology.

The bibliographic databases and document delivery in future is likely to become byproducts of the evolving e-journal system. As a major benefit of the e-journal revolution the table of contents and abstracts for most of the scholarly and scientific journals are accessible today, free. This development can fill the databases access gaps for Indian Libraries to some extent.

2). Copy right issues in Electronic publishing :

Essentially, "e-publishing" is when you have your book online to be downloaded onto a user's computer. These books are stored online and the reader's download the book or article to read in leisure. An "e-book" on the other hand, is an electronic book that can be read with a computer.

The first issue is whether electronic publishing qualifies as publishing, as per the copyright act 1957 (India) publication means making a work available to the public by issue of copies or by communicating the work to the public". There are two ways of publishing as per this definition the first one is that of issuing copies, and the second one that of communication to the public other than by issuing copies.

What is e-publishing? It is making available to the public "copies of work" Through a network of computers or Internet. Here, the time-honoured concept of

'copy of a work' comes under challenge. When we talk of a copy, in the case of a literary work usually a paper copy, which is bound. When we say a publisher has published 1000 copies of a book, we mean he has brought out 1000 material copies that we can touch, count, stack, destroy.

In the case of e-publishing we do not see the 1000 copies stocked in one place. We can not touch or count them. Even their dispatch is quite different from the usual distribution through transportation. Here, through signals of binary digits zero and one, we distributed to any number of computers simultaneously and instantly.

2.1 Copy :

What is a copy? The Act does not define 'copy'. But we know that copy of a book is a identical reproduction of an original. In fact the etymological meaning of 'copia', the Latin root word, is transcribed. Section 14 (a) says that reproduction includes "storing" of a work in any medium by electronic means. Since e-publishing is issuing of copy of a work using of electronic means and it involves storing of the work in a digital format, it is covered by the definition of 'publishing' in section 3 of the copyright Act. Therefore, e-publishing protected under copyright Act.

Section 3 of the copyright Act further provides that communicating a work to the public is also 'publishing'.

Communication to the public means making any work available for being seen or heard or otherwise enjoyed by the public directly or by any means of display diffusion other than by issuing copies of such work regardless of whether any member of public actually sees, heard or otherwise enjoys the work so made available.

The language of this definition is such that keeping any work in a digital format in a computer that is a part of a network becomes 'publication'. Thus

storing works in such web sites as 'publication' as per the copyright Act and, therefore, e-publishing comes under the purview of the Act.

Internationally the major issue that e-publishers were facing was that of coverage of e-publication by the definitions of rights of reproduction and distribution strange as it may see, in India, the copyright Act covers e-publication.

2.2 Right of distribution :

With regard to the right of distribution there is, however, the issue of 'first sale exhaustion' section 14 (9) (ii) of the act while reversing with the copyright owner, the right to issue copies of the work to the public, excludes 'copies already in circulation' from the purview of that right. So far as physical copies of a work this does not cause a problem and is a perfectly understandable exception.

However, in the case of a digital copy how this exception clause works is a root point. If a person having purchased a work in digital format makes another copy for personal use and then sells the copy to another, will he not be infringing on the right of the owner? More importantly, how does a publisher or copyright owner monitor movement of a second hand copy in the e-world?

2.3 Digitization of non copyrighted matter :

The criterion of 'originality' the basic concept of copyright raises certain questions in e-publishing. This has many connotations. For example, if a publisher converts a work in the public domain to a digital format from the print format, how his investment and effort are protected? Since the work is a non-copyright one, any person can freely reproduce or distribute that work. Therefore, if a person gets access to the digital version and makes a number of copies of the same then he will not be infringing any right. At the same time, the investment of the publisher goes down the drain. How to protect his initiative and investment is a point to be probed.

2.4 Multi – Media Products :

A major issue in e-publishing is that of 'multi-media' products. Because of its versatility, e-publication does not limit itself to more reproduction in digital format of a literacy work. They tend to become multi-media works. This poses some difficult questions for publishers especially;

- I. What is the 'work' to be protected?
- II. Who is the author of such a 'work' and the owner of the rights?

Is the multimedia product a literacy work or a cinematographic work or a sound recording? Under which class would it go if it were a some of many components, which form separate classes of work? This poses further problems. Protection of a multimedia product a highly complex issue because of variegated nature of rights in different works. The application and enforcement procedures of rights such as communication to the public and rental rights differ from one class of work to another therefore; there may be a need to introduce a separate class of copyright works as multimedia works whose rights may differ from those of other classes.

2.5 Across Countries and Continents :

E-publishing by its very nature spans across countries and continents. This raises a number of questions with regard to the laws applicable and territorial licences. If a book written by an Indian author, published by a British firm, issued through a website located in Hong Kong and made available on the internet to a person in the U.S.A., the law of which country would be applicable? Can owners issue territorial licences in such publications? If so, how those territorial licences can be respected and enforced. There are issues, which do not elicit ready answers.

Presently, it is not possible to insure whether the presented information is legitimate or not. By making adequate provisions in the copyright law, the integrity of publishers and authors works will be protected allowing for one to

know the authenticity of a work. Some assurance must be therefore the publisher that they are the ones making the profit on a work. Publishers will need to determine a way in which they can cover costs and still work within the constraints of the electronic format-because of the uncertainty of electronic rights, publishers and authors are attempting to solve the issue on their own because the legal field has not resolved copyright issues.

Electronic publishing products may includes text, graphics, audio, video, numeric and textual databases references sources such as dictionaries and atlas and computer programs.

3). Need and importance of Electronic Publishing :

The need to control and provide easy access to ever increasing volume of Information, the explosive growth of the lost raw materials used in publishing, the need to reduce the time required in conventional publishing and the realization for the potential and unique feature of Electronic media are some of the reasons which have resulted in the shift of emphasis from conventional publishing to electronic publishing.

The varied tastes of the user communities along with their steady claim, pinpointed and Instant Information obligated the libraries and Information scientists to transform the dimension of dissemination of information from customary to electronic form so as to persuade the need of the users at any point of time, for which electronic publishing became a positive *modus operandi* to unravel the problems of the users. In electronic era electronic publishing is a decisive constituent to prove the validity and the validity of technological efficacy of Information sources in the most appropriate and effectual manner.

Electronic publishing allows faster dissemination of Information than print technology because the step of printing on paper is eliminated altogether Information

may be made accessible on electronic networks weeks or months before it can appear in print forms.

Reduction in the numbers of costly subscription to periodicals and journals. Reduction in the space required to store paper based Information. Access update Information a user can perform a fast in minutes that would take hour to perform a manually. Information is updated regularly wherever library references material can be out dated. The time consuming job of searching manual systems, which often vary on the depth of knowledge of an individual is removed. It eliminates the time spent in clipping and filing articles which may be of interest.

Publishers embraced electronic publishing technology recent years because it speeds up the publishing process, makes editorial changes easier to accomplish, and enables the relatively small publisher to effectively participate in publishing authorities. Electronic publishing has opened up new markets such as publication of encyclopedias in CD-ROM format, creation and distribution of electronic databases of indexing and abstracting services, and electronic journals. In fact, since most of the publishers are now requiring their authors to send in their manuscript in electronic format, it is relatively simple to load them on computers and make them available to readers and libraries.

Electronic publishing resources improved library services to their customers and made this internal operation more efficient. For instance users can now search vast databases, print results of their searches, download papers and information of interest, and further incorporate this electronic Information into their regular day to day work.

Electronic publishing gives greater freedom to researchers to disseminate their research results without having to go through the cumbersome route of finding a publisher who is willing to publish their results. In this context, publishers and scholars are working with different objectives – publishers need to make a profit while

scholars to by pass the publishers and disseminate their scholarship directly to others and interested by persons. Some reasons of E-publishing which can be categories as :-

- 1) Need to support paper and Electronic methods of knowledge dissemination parallely.
- 2) Information needed by faculty and students is increasingly exponentially in the science.
- 3) Inter – disciplinary research / new fields of research have increased the scientists need for new Information.
- 4) Rising cost of journal publications coupled with the explosive growth in research and the concomitant explosion of paper journal in various disciplines have made it impossible for most libraries to maintain a comprehensive selection of literature.

4. Existing Publication Routes :

Let us explore this idea of extending human knowledge further by considering the publication routes currently available to us. Journals exist principally to disseminate research Methodology and results to other workers active in the research area. Books typically provide overviews of the research field in a more tutorial fashion than do papers their coverage is normally wider but less detailed. Conversely conferences are generally used for exploring ideas and presently preliminary results, their proceedings being principally are cord of people's opinions before the event. They are usually regarded as being more ephemeral than journal or book publications, through the increasing tendency to publish conference proceedings in book form intimates against this Indecol. There are many very widely referenced conference publications and equally many rarely referenced journals ones.

The crucial factor of these publications routes, development over the years, is that of peer view : an author must be able to convince other efforts in the research area that his or her work is worthy of publication. The standard of referencing for journal

publications is typically quite rigorous. This is the above mentioned principle of extending human knowledge other types of paper are also of value of course : review of particle techniques or applications, tutorials and so on.

For books, peer reviews is also an intrinsic part of the writing process, through the over siding factors here at least from an author's point of view – is the quality of explanations (publisher are quite rightly, concerned that the book should have a market) originality is less important in book publication since the intended audience is usually non – expert.

Conference publications are also subject to peer review but this is typically less rigorous than for other types of publication. This is partly because conferences are intended to be a place where one may discuss ideas and results with other researchers. There are other reasons too the review panel for a conference is typically of limited size and the dead lines required to ensure rapid decisions are such that errors may be overlooked. The more cynical among us might even remark that conferences exist principally to make money and consequently even poor submissions may be accepted by some conference organizers to increase the number of delegates.

There is another type of publication that must enter our consideration and that is the technical report. These are quite rightly, regarded with some caution as they have not been subject to the peer review process, hence, their accuracy and correctness are always suspect. Nevertheless, there are many excellent research report is actually the better work of reference because there is more details of the methodology and results.

The number of research reports made available is rapidly increasing. Although this is generally a convenient state of affairs, since reports are available quickly after a piece of work has been completed, there are also dangers, the lack of peer review and the possibilities for bias are obvious. More worrying in the danger term however is the

potential for the loss of knowledge : technical reports can and often do disappear as quickly as they appear and when that happens there are rapidly forgotten.

4.1 Drawbacks of Existing Publication Routes :

Having considered these routes for dissemination and their success, let us turn our attention to the problem associated with them.

From the above discussion, it might appear that the journal publication routes would be difficult to improve upon. This may be true in principle, but the practice is somewhat different. Firstly, the number of journals has increased dramatically in recent years, due to a number of factors :

- The advent of computer typesetting has simplified and streamlined the production process, reducing the overheads involved in journal publishing and hence facilitating journals with smaller readerships;
- With the pressure to publish upon researchers, and with the long established journals being unwilling or unable to greatly increased the number of papers published, there is a market for other journals;
- The increasing specialization of every research discipline means that there are more niche journals (usually termed specialist publications).

These developments, each of which seems beneficial individually, have some unfortunate consequences when considered in toto: although journals publication has become easier and arguably cheaper, the cost of institutional libraries has certainly not decreased; and, since the number of journals required to maintain a good coverage of a research area has typically increased, many libraries are now in the position where they are having to terminate their subscriptions to journals. This does not benefit the researcher, who must either take out personal subscriptions (not feasible if he or she is alone or as part of small group) or find some other means of monitoring published papers, perhaps

by traveling to a neighboring institution or by making use of abstracting services (which also cost the institution money, of course). It is easy to say that many of the 'upstart' journals are of indifferent quality, but this does not imply that all papers published in them should be disregarded.

A related issue, also consequent on the increasing specialization of researchers, is the duplication of work that is well-established in other fields. For example, few vision researchers read the computer graphics literature or vice versa even though the geometrical basis for the two is identical; people working in remote sensing and medical image processing who need to align images are not familiar with techniques developed in electron microscopy; and so on. There are probably two reasons for this: the relevant journals may not be available to researchers, and they may not have time to study them in any detail. It might be argued that this is a direct consequence of there being too many journals; however, the authors would argue that, with effective abstracting services, it should be easy to locate relevant papers.

The second major problem with journal publication is that their latency – the delay between submission and publication – is too long, up to two or three years for the more prestigious journals. Although accepting that rigorous peer review takes time, it is difficult to argue that this is efficient professional communication. Since many research groups work on closely related problems at the same time, this lag in making new ideas and results known does us a disservice. Indeed, the increasing tendency to make available internal research reports is partially in response to this phenomenon.

The final point to make about journal publications has already been touched upon above: constraints are invariably placed upon authors regarding the lengths of papers. In order to be able to discuss methodology and present experimental data, this results in papers that are often difficult to read and understand. These same constraints mean that there is rarely space for authors to

describe why they have taken the approach being described and so on. (Indeed, one of the authors has been asked, on more than one occasion, to remove such material from papers because it is not relevant). However, this type of discussion offers inside to the reader. There is a well-published case in which researchers involved in the early development of atomic energy are being interviewed by the current generation of researchers in order to capture just this type of information while it is possible: they found that reading research papers and reports is simply not enough.

The space constraints mentioned for journal publications normally apply with a vengeance to conference proceedings: three or four quarto-sized pages not a uncommon limits. This is enough space to present a technique in a compact form, along with one or two (hopefully representative) results, but nothing more.

We have to ask ourselves these types of publications are serving us well. To give a topical example, one of the main problems facing vision at the moment is producing techniques that are robust. Do publications that show only one or two carefully selected examples really further the discipline? The authors would argue that they do not. Of much more value are reports of work that present a technique, test it on a significant corpus of data, and characterize the other published techniques. It is not necessary that a new technique perform better than a well-established one, merely that it shows promise.

4.2 Online Publication :

Having expounded the basis for making others aware of research and identified the major drawbacks of existing publication routes, let us turn our attention to the dissemination of information over computer networks. Just as with conventional journals, there are several classes of online communication, which we shall consider in the following paragraphs.

The first class, familiar to almost every researcher, comprise direct electronic mail (email) and email lists. There are several email lists in the vision area (indeed, one of the authors moderates one). A culture has grown whereby these lists are used principally distributing conference calls, there is almost no technical discussion in them – which is something of a surprise, since that is precisely what most of them were set up for.

Closely related to email lists are newsgroups. Although there are many newsgroups that carry relevant and useful information, there is only one dedicated to vision – and that simply mirrors a mailing list! In fact, with the opening up of internet, the signal-to-noise ratio of most newsgroup is rapidly approaching zero, and the politeness and respect for other people's opinions has already vanished. None of the information dissemination routes in this email and newsgroup class provide for the more formal types of communication that are the subject of this essay.

The second class of communication route, more relevant to our discussion, comprise two separate phenomena :

- Pre-print and technical report servers : There are several disciplines where rapid dissemination of research work has been achieved by instigating servers for pre-prints (i.e., papers also being submitted for conventional publication) and technical reports. These typically operate by distributing abstract by email from a central server; interested readers then acquire the complete paper by anonymous FTP. The best-known examples of this currently lie in the particle physics field, where papers are typically written with TeX or LaTeX mark up, figures being in POSTSCRIPT.
- The first generation of "electronic journals". There are over 800 such journals, covering all the natural and social science and the humanities. (Indeed, some of those in the humanities have been the most successful). Some are, to be candid, little more than mailing lists, while other do

involve peer review of varying degree of rigour. They are typically text only, unable to provide quality output, and have no real support for mathematics or graphical output. Many of them are distributed only by email, or are retrievable from only one server, so there are potentially access problems.

The third class and the current state of the art consists of journals on the world Wide Web (WWW) which offer quality output via POSTSCRIPT and are able to accommodate mathematics, tabular and graphical material. They offer some advantages over printed journals too: they are searchable and are able to offer hypertext links within papers and to cited works. Many of these journals are organized analogously to conventional publications, having rigorous peer review, editorial boards, and so on. It is worth noting that several well established conventional journals and professional societies are slowly moving towards online publication.

This latter category is almost enough to meet the needs of the vision, pattern recognition, and related communities but not quite the additional technology required, however, does exist, albeit in a rather experiment form in some cases.

Images, the staple diet of vision research, are supported by all the popular WWW browsers, both on workstations and on PC-class machines. Both uncompressed (PBMPLUS) and compressed (lossy via JPEG or lossless via GIF) formats are supported. Online viewing of imagery has four major advantages over printed imagery.

4.3 Advantages :

1. Colour images are significantly more expensive to print than monochrome ones and so colour images are at a premium in most

journals. This constraint does not, of course, apply to online viewing: the additional bandwidth required to carry colour is not great and all serious researchers have access to colour displays.

2. The printing process invariably degrades the appearances of images and can introduce visual artifacts. The situation is even worse for colour images since the colour gamut available via printing ink differs significantly from monitor gamuts.
3. Images with poor visual details may be enhanced interactively by the online reader, perhaps yielding further insight into the operation of an algorithm.
4. Imagery available online may be used by other researchers. This is a particularly significant point, one that we shall consider further below.

A topic that is important in many areas is motion and this is something that no printed journal can accommodate. (Actually, there are image coding journals that have tried distributing videos with issues, but this is problematic libraries are not well equipped for storing or viewing them, and the degradations introduced by bulk copying onto even U-matic videos can mask fine detail). In the online case, of course, replaying motion sequences comes down to having an appropriate "helper application" for a WWW browser. The current norm is to use MPEG-1 decoders; while this is not necessarily appropriate for all applications due to the nature of the compression, it is certainly acceptable for viewing. Indeed, with a careful choice of viewer, one may replay sequences in slow motion or frame by frame.

Although vision per se is concerned principally with imagery and information derived from them, the closely related discipline of pattern recognition need not. Research in areas such as speech recognition which has made important contribution to image analysis would also benefit from the ability to play audio data. As with motion sequences, most of the popular WWW browsers support audio. It must be admitted that there are a number of formats for

storing audio data, but it is easy acquire software (e.g, sox) that performs formats inter conversion.

There are other developments in terms of presenting data on the WWW that will be beneficial the most significant of these is likely to be the Virtual Reality Modelling Language (VRML), a "language" for specifying 3D environments. Since one of the most important topics in vision is the retrieval of 3D structure (from stereo motion shading Etc) a facility whereby an author may show his or her results by means of a 3D model, one that the reader may rotate using a VRML browser, would be invaluable. The current generation of VRML browser display static scenes ; however, adding "behaviors" to VRML is under active discussion, so it will soon be possible to produce animated 3D displays, with obvious applications in displaying results.

The features just mentioned can be supported by an online publication much more easily than by a conventional publication and without the degradations caused by using paper as an intermediate medium. Moreover, this can be extended even further if the final destination of the research is considered to be not just the human reader but also his or her computer. This raises the possibility of exchangeable datasets. Although databases of images exist, it is not clear how widely they are used and they seem to be somewhat decoupled from the application aspect of research. By making an explicit link between the publication and the image data within it, the reuse of this data is encouraged, facilitating comparative evaluation of algorithms.

What applies to data applies equally to code. Authors are discouraged from presenting code in their papers even though this is often an easy way of explaining the operation of an algorithm. If source code were available within a publication, it would encourage readers to try out their own experiments and build upon the work presented. Not all authors would wish to do this of course, but at present the path is not open those who do.

4.4 Possibilities for Online Publication :

The obvious medium for disseminating online publications is via the WWW, as WWW browsers such as Netscape and Mosaic already support images, audio, and video on both PC class machines and workstations. Since there are no 'page' constraints on WWW documents, authors are free to write arbitrarily long papers if their work justifies it. (of course, extraneous and over long text will have to be shortened, but this is a common outcome of reviewing). Moreover, many of the shortcomings of HTML, the mark-up scheme for WWW documents are being eradicated. HTML 3 will be SGML compliant, support the concept of style sheets, and incorporate facilities for mathematics and tabular material.

A further advantage of the WWW for 'publication' is that utilities exist to convert from the major text preparation tools used in science and engineering (e.g. LaTeX, MS Word, Word Perfect, Frame Maker) to HTML. This allows authors to prepare their submissions in an environment that is familiar, if they so wish, leaving the conversion to HTML until the point of submission. (Or perhaps even later: it might be easier for the editors to perform the conversion, as they may wish to use customized converters that impose the journals style). The viability of this process is illustrated by this document, which was written using LaTeX mark up and converted to HTML via LaTeX.

To be successful, an online journal should not be tied to a particular server: there should be servers in different geographical region that mirror each other's papers and WWW pages. (There is, of course, software that can carry this out automatically). As well as providing fault tolerance, so that if one server were down, a reader need only point his or her WWW browser to another, this scheme would ensure researchers obtain the best response for reading or submitting papers.

Having produced papers on the WWW, it is but a small step to contemplate recording them on CD-ROM. This might, for example, be an appropriate way to solve the problem of distributing online journals to libraries. (It is unlikely that this could be arranged free of charge, and so this has potential as a source of revenue for individual journals). Paper copies are still required in order for the journal to be assigned an ISSN; but the number of copies that must be lodged is small and they are easily generated from the online version.

Let us consider how an online might appear, for both a reader and an author. The scenario described below is just one possibility; one that the authors consider is most likely to be successful.

For a reader.

Imagine, for the sake of argument, a researcher who is not working in the vision field but who wishes to make use of vision or pattern recognition techniques in his or her work. This person learns of the online journal and wishes to use it to learn about potentially relevant work. The first step is to connect to the main WWW page for the journal. That page offers the reader links to further information, including :

- The journal's "mission statement"
- Information on how to read papers online and how to print version of papers
- A list of the keywords used to classify papers
- Searching for a paper by keyword, by author or by institution
- Free text search through papers
- A complete list of published papers
- A list of abstracts of paper under review
- News and conference announcements
- How to "subscribe" to the journal
- How to submit a paper

The person could learn about relevant papers by identifying appropriate keywords from the list, then searching for papers that supply that keyword. If that is not successful, the person could perform a free text search through papers using, for example, WAIS. Any papers found by the searching process will be presented to the reader as a WWW page of titles, authors, and abstracts, with links to their actual texts. This is essentially how WWW search engines, such as the popular Yahoo one, work. An implication of this is that will be beneficial for a journal to have a wide remit, as it will still pick up papers that might be peripheral to most people's interests but highly relevant to a few readers. Alternatively, related online journals might share publications databases.

There is one item in the list that may appear strange for an online journal:

- How to "subscribe" to the journal

The authors envisage that individuals would subscribe by filling in a WWW form that defines a "profile" of interests (probably using the same set of keywords). Then, when a paper is published, subscribers with profiles that match the keywords in the paper are automatically notified by email of its title and abstract, the message also containing the URL of its text. In an altruistic world, this type of subscription would be free; but individual journals might in principle charge for it, as a way of recouping the cost of the system that hosts the journal on the network.

For an author.

The "home page" by which readers access the online journal can also point potential authors to submission instructions. It is envisaged that the submission process will run as follows :

1. The author completes a WWW fill-in form detailing the paper's title etc and emails it to a submission address at the journal. The paper is assigned a unique identifier (probably containing the year and the site to

which the paper has been submitted) which the author uses in all further communication.

2. The author uploads his or her paper (perhaps in LaTeX format) by anonymous FTP to the journal's server compressed tar or zip file which also includes images and figures.
3. The editor extracts the paper from the unloaded version, saves it in an appropriate directory, and makes it available from the WWW server with password protection, perhaps as POSTSCRIPT. The paper may be anonymized if double-blind refereeing is employed.
4. The editor selects reviewers and notifies them of the paper's URL and the associated password, without which the paper can not be viewed.
5. The reviewers return to the editor their comments via email.
6. The editor forwards the reviewer's comments (suitably anonymized) to the paper's authors by email.
7. Assuming the paper was accepted, the author uploads the revised version by anonymous FTP.
8. The editor's 'publishes' the paper by allowing public access to the directory, linking the paper in the journal's WWW pages, and emailing the paper's details to subscribers as appropriate.

It is worth noting that many of the individual steps in this sequence may be partially automated by means of appropriate software. Indeed, there are programs (e.g. edas) already in existence that perform several of the tasks. If confidentiality is regarded as problematic --- since email is clear text, anyone can in principle read it --- then public-key encryption packages such as pgp may be employed for most of the communication steps outlined above. Finally, authors are often concerned that they have little visibility of the status of their papers. With the scheme outlined above, all transactions for each paper being recorded, it is easy for a WWW CGI script to inform a requestor that, say, one review has been received but that two others are outstanding.

The great advantages of this 'publication' route are that the only delays built into the system are those involved in the peer review process. It is also entirely possible that editors may link together papers. This might, for example, be used to trace the development of a technique through a number of references; or it might be used to link to further papers that agree or disagree with an author's findings.

4.5 Outstanding Issues :

The key to a high quality professional journal is the peer review system. The present system works to an extent, but poorly selected, inexperienced and/or overworked referees mean that the process is often less than perfect. There are many other ways of applying peer review to maintain high quality which an online journal would facilitate. One option is that of "open peer commentary" plasticized in Brain and Behavioral Sciences. In this journal, papers are accompanied by as many as twenty or thirty 1000-word invited commentaries from experts, together with a response from the authors of the initial papers. This allows the papers to be placed in context and encourages fruitful discussion of issues raised. A hyperlinked online journal without page limits would allow such a scheme to be applied. Another possibility is to include, within the online journal, a list of links to unreviewed papers or technical reports, to encourage readers to keep up to date with the latest work and to communicate with their authors.

Apart from the question of peer review, the major concern expressed by potential authors when the idea of online publishing is suggested.

5. Difference between Printed Document and Electronic Document.

PRINTED DOCUMENT	ELECTRONIC DOCUMENT
1. Physically Presence : Books and other printed texts have direct physical presence. You can hold them in your hands carry them around stick a finger between the pages and have a book mark in them.	1. Electronic texts appear on displays, gleaming at us from behind glass or plastic cover, with no tangible properties of there own you can touch the device that shows you an electronic book and if the device is portable, but you can not touch the book itself.
2. Format : The format of the printed document is basically paper.	2. Electronic books are available in electronic format like floppies, CD-ROM's, text file databases, HTML format etc.
3. Expensiveness : Printed documents are expensive.	3. Electronic document are expensive the first times, updates are normal.
4. Restriction : The research of the printed documents are not restricted.	4. The research of the electronic books are restricted to those who have or can have access to computers and networks.
5. Mode of Delivery : The mode of delivery may vary and the time taken for delivery is slow and limited.	5. The delivery mode is fast ranging from seconds to minutes through networks.
6. Cost : Cost of archival is relatively less	6. The delivery mode is fast ranging from seconds to minutes through networks
7. Technical Knowledge : No need of technical knowledge.	7. Cost of archival is relatively expensive at the moment.
8. Organized : Physical stage can be organized.	8. As of now e-books are unorganized at present.

6. Characteristics of Electronic Publishing :

Electronic Publishing has specific characteristics that distinguish it from print publication.

- i. Electronic publication can be produced and disseminated very rapidly.
- ii. An electronic text can be updated or corrected with the same immediacy, if correction is necessary.
- iii. Electronic publication can be made collaborative and interactive, involving either several 'authors' or authors and readers.
- iv. Electronic publication can be disseminated world-wide without the need for separate rights/negotiating for different countries and without the costs of distribution and reprinting.
- v. Where an electronic publication is charged for, the producer does not incur the costs associated with retail book selling.
- vi. Electronic documents are not localized in other words; with the help of late communication connection they can be used from any where with the user even not knowing where it is stored geographically.
- vii. Several people can use online electronic media at the same time.
- viii. It is easier to copy them or download them in user file.
- ix. They are less bulky than the paper documents.
- x. They are very flexible, as it becomes easier to revise, rearrange, reformat and combine them with other documents.

7. Issues and Concerns of Electronic publishing :

The problems and concerns of publishers, library and information centres as well as subscribers include issue of single article verses full issues of electronic journal, copyright, users friendliness, pricing, Intellectual property rights, professional

role, networks, incompatible hardware and software, formatting graphics, scholarly recognition and obsolescence some of the problems in electronic publishing are :

- i. High initial cost
- ii. Incompatible hardware and software.
- iii. Weak infrastructure of computer and communication network.
- iv. Delay in release.
- v. User training.
- vi. Incredibility.
- vii. Inconvenient to use.

8. Advantages of Electronic Publishing :

Electronic Publishing would have several advantages :

8.1 Accessibility :

It will take only minutes or even seconds rather than hours or days (provided the equipment is available) more efficient dissemination of information is possible through the matching of articles newly accepted into databases with the interest profiles of potential users.

8.2 Speed of production and distribution :

The printing and mangling processes are eliminated while authoring and publishing systems can be integrated easily. Electronic transmission, especially in the review process, saves valuable time. This production mode also establishes network communication among authors, editors and referees.

8.3 Subscription cost :

The subscription price for print journals is increasing rapidly in contrast to the decreasing budget of libraries. Compared to this subscription cost of e-journals is less. The producer does not incur the costs associated with retail bookselling i.e. there are no 'middleman' costs.

8.4 Hyperlinks :

Link available both within the article and to other articles are very helpful for the users. Even publishers and authors can be contacted via e-mail links.

8.5 Multimedia capabilities :

Besides the traditional plain text, data and information can be presented using other features like three-dimensional models, motion video and sound.

9. Disadvantages of Electronic Publishing :

There are some disadvantages of electronic publishing such as:

9.1 Technological Barriers :

The technology is still, to a significant degree, user friendly to many people. All the academic community may not have access to needed equipment and network. They still reach only a minority of potential users or customers.

- a) An electronic version not only requires computer hardware, but also software, and this software will have to know the format of the journal to display it.
- b) On-line journals are less permanent (the response "this URL doesn't exist" is quite often).
- c) Some time the network connection can be slow and the screen quality of graphic and photos will not be that good.
- d) The technology consumes a greater amount of energy in its use than the book.

9.2 Economic Barriers :

- a) The equipment required for accessing e-journal is expensive, frequently needs replacing as technology progresses and incurs heavy maintenance costs.
- c) Even to read the abstract one may have to pay too much students and researchers who are the main users in academic libraries may find it difficult.
- d) The pricing schemes of some suppliers of e-journals are very complicated and limiting and this might hinder libraries from utilizing e-journals. Sometimes full-text e-journals cover only a small percentage of what is available in paper.

10. Access Models for Electronic Publishing :

Internet by its very nature of technology and utility is a remote access model. Seamless access is a possibility through linking information resources like databases and e-journals distributed at several sites. Internet and its secured cousin Intranet have however, through up different access models that fit into the convenience of libraries. The access models for Electronic publishing have emerged such as –

i) Electronic Book :

Publishing a book electronically is to achieve quick dissemination of information. A book may not have contemporary value that a journal has but it certainly has an archival and reference value. A number of Encyclopedias do come out on CD-ROM. It is felt that the Internet is not a satisfactory platform for publishing full text of documents but CD-ROM is an appropriate medium for publishing books. Books length e-text are also available on Floppy disk. Most e-texts published on CD-ROM are public domain works including encyclopedias.

ii). Electronic Periodicals :

This new medium is vehicle of scientific research. This category includes electronic journals, newsletters, magazines and discussion lists. Perhaps no other area in electronic publishing has received more study than the area of electronic journals, particularly as they apply to scholarly research.

Franks (1993) authorized a more recent article that provided analysis of current forms of electronic journal publication, explored some alternative possibilities for an electronic research journal and commented on the strength and weak nesses of those alternatives.

iii). Electronic databases :

With the emergence of computers and communications technologies, the strength of Information system in the development of modern database has taken new shape. The Information originating from a database has become a large segment of electronic publishing that provides a base or foundation for procedures, such as returning information, drawing conclusions and making decisions.

The holdings of the library database consisting of books, periodicals, reports and these can be converted into electronic form that allows access for public use through digital networks. The online electronic library card catalogue (OPAC) shows how information could be published and that enables users to search the document with various access points like author, title and subjects.

Various electronic database publishers today account for publishing information both bibliographic and full text on CD-ROM as well as making them available for on line retrieval. The prominent on-line publishers include DIALOG, BRS, EBSCO host etc.

An excellent example of an electronically published database, the ERIC (Educational Resources Information Centre) database is the largest educational database in the world that contains more than 800,000 records with the addition of 30,000 new records per year. ERIC available in CD-ROM format as well as on the free of charge (URL:<http://www.accesseric.org:81>).

iv) Text processors :

A number of easy to use text processing programs have been available for years. Simple text processors such as notepad for windows, simple text for the Macintosh and edit for DOS allows users to easy open and save text files.

v) HTML (Hyper Text Markup Language) :

HTML is a simple language used to create web documents. It is these HTML language "tags" that designate heading, list, body, text, images, hypertext links etc. it is based on SGML a formatting language developed by the International Standard Organization (ISO) for higher level document annotation. Hypertext link and cross platform capability are some of the advantages of HTML.

vi) SGML (Structural Generalization Markup Language) :

SGML is a set of rules for describing the structure and managing the content of any digital document. It can create complex documents that can be shared across a corporation or industry that can remain linked to source Information for instantaneous updates.

vii) PDF (Portable Document Format) :

It is an electronic document system that allows for the creation of formatted documents that includes text, graphics and page layout elements along with Hypertext links to other locations within the document or to other

documents. Any file that can be sent to a printer can be saved as a PDF file and display using adobe Acrobat software.

11. Role of Librarian in Electronic Information Environment :

Electronic publishing may be considered as preparation, storage and dissemination of Information primarily textual and graphic, using computer and telecommunication. Electronic publishing has started playing a powerful role in Library function. The types of materials beings published electronically or optically are :

- I. Indexing/abstracting journals.
- II. News paper/News magazines.
- III. Primary journals.
- IV. Reference books.
- V. Directories.
- VI. Library catalogues, indexes.
- VII. Consumer applications.

Electronic publishing may be magnetic type/disc, CD-ROM, Audio-video cassettes, etc. electronic can be in the form of a database that can be searched offline and online. Publication in electronic media will entail quicker and better literature search and retrieval service including SDI to users. Online ordering of documents and dispenses with paper work for carrying out the transactions. If a library has equipment like graphic terminals, facsimile machine and digitizes with Satellite earth station, very fast document delivery service could be offered. Developments along these directions are already taking place in western industrialized countries.

11.1 Issues before Librarians :

Librarians have been dealing with different formats of reading materials over the years. Some of the issues that are often mentioned with respect to electronic journals are briefly described below :

I. Access v/s ownership :

Subscription policy for e-journals are for normally for one year. Afterwards it has to be renewed. Several issues related to this aspect is not yet clear.

II. Collection Development :

Identification, selection, processing, organizing and evaluation are some of the issues that needs to be addressed. Further, whether to continue the print version or subscription to both print and electronic or electronic only or no subscription at all, but pay-per access. Whether to have single access budget etc, are some of the issues that will have to be faced.

III. Processing :

Classification and catalogue will drastically change. Will the catalogue entries provides a link to publisher's site or what are the other details the entries have OCLC and other agencies have started working on these issues, but it will certainly change the whole process of processing e-journals.

IV. Hardware and software connection :

Not all libraries can afford a to have full connection to the interne and have all the facilities to access, download and preserve the e-journals. Cost involved in creating the entries infrastructure, network connection and printing may be deterrent in using e-journals.

V. Network Traffic :

Current trend indicates that everyone is in a hurry to place their interest, this is going to slow down the data transfer rate, particularly when one wants to access the journal with images, graphs, charts, etc.

VI. Economic factors :

We fact that e-journals will cost less, but one can find from pricing policy of some of the publishers that, these journals are not going to make any substantial saving for librarians. Whatever little saving can be done from annual subscription will go as overhead cost.

VII. Storage and Archiving :

Most of the e-journals are available with images hence require large disk space to store and archive. Though the cost of hard disc has gone down, but looking into the requirement for archiving the back issues will be difficult to cope with. Also, whether the new software can handle for retrieval for stored data.

VIII. Standardization :

It is not very clear, what is the acceptable standard format, that all e-journals will follows. There are several formats viz. PDF, postscript, SGML, HTML, TX, DVi and ASCII etc. that are being used. In some cases, it is a combination of more than one. Some publications have their propnetary software to handle e-journals. The libraries will need to have all these software to access, retrieve view, download and print the articles.

IX. Training and Education :

Not all librarians and users will have familiarity in using the technology associated with e-journals. Training the staff and every user will be another task for the librarian which takes considerable time.

X. Copyright issue : Controlling the misuse or use without paying for e-journals will be a major problem for both publishers and libraries. It is very difficult to make users to adhere to copyright law.

XI. Acceptance :

Acceptance of e-journals by the authors, librarians and end users is another question. Not all the authors would like to publish their articles in electronic versions. Librarians are also yet to accept the e-journals as an alternative to print version librarians are also yet to accept the e-journals as an alternative to print versions. Having used print versions for so many years, users will take some time to feel comfortable with e-journals.

Other issues to be considered are evaluation of e-journals, retrieval and browsing individual's subscription and bibliographic control of e-journals. These will give new dimension to the librarianship and provide new opportunities for the professionals to work and enhance their skill to keep up with the trends.

12. Role of Publishers in Electronic Information Environment :

The publishing industry is based on the integrity of any work created or published and the willingness of the public to pay for such works. The publisher plays an integrated role in the creation of the work though editing quality control and assurance, design, production distribution, marketing and promotion. Electronic publishing does not necessarily deprive the publisher of the opportunity to create a visual identity in the mind of the reader. But to avoid being a faceless address on the Internet, the publisher will have to resort to new strategies for helping to create or preserve their identity.

In a electronic world, role of publishers will be greater in the electronic publishing of works. As time goes by what the publishers do will become increasingly important as there role in managing the peer-review process and collecting papers into reasonably coherent and stable journals has been of great benefit in paper publishing. Hence it seems likely that it will be important in electronic publishing. By electronic publishing the publishers can create a much more individualized product for their customers as there are more opportunities for learning about one's customer base, for getting feed back from readers, and for improving one's product without having to wait years for one's inventory of the first printing to be sold out.

In the digital age, when text and even images can be manipulated and altered seamlessly, and without a trace, authenticity becomes a paramount consideration for which the publishers can try to offer reliable source for the real thing with the new digital technologies the opportunities for theft are so much greater that in fact the market for legitimate sales will shrink as the market of readers and users increases.

Publishers justify the assignment of copyright to them by the values that they add to publications and the services they offer. It is sometimes difficult to understand how their role would be compromised if they were just licensed to publish in specific ways, if real, the values they add should ensure their prosperity. More and more innovative ways of producing, collecting and disseminating information are being invented in the digital world. Publisher's scientists and brains will have to move with times and adopt themselves according to the need of the situation. The roles of the publisher in the digital age will certainly include many of these aspects with some changes and additions that will evolve.

13. Copyright for Electronic Information :

The legal issues of electronic Information include copyright, ownership, pricing and rules and regulations governing multiple usage. The problems and concerns of publishers, libraries as well as users of electronic information like

readability, accessibility and acceptability by the users, readability, accountability of back issues and volumes, authenticity of the electronic information preservations and archival maintenance are to be thought of.

Electronic information is not permanent. It is easily amendable to revise, modify, re-revise, re-modify without leaving any resemblance to the original. Its ownership is non-ascertainable and at times can be questionable.

13. Future Trend in E-publishing :

New technologies create new consciousness. The printed book was revolutionary in its time, resulting in new ways of interacting socially, economically and politically. The printed book charged the way people perceive and interact with the world. Today's computers and telecommunications technologies are creating changes that are equally profound again changing the way people perceive and interact with world.

The existing news is that the industry is groping towards this still uncertain, intriguing future. Infact e-book regarding and sales are stronger than ever. In the past year, 1,600 titles were download more than 3.1 million times at the e-text library at the university of Virginia. That's 8715 free e-books per day. Mean while, independent publishers and retainers such as Fiction wise and Book locker.com, Hard shell word factory and palm Digital Corp to name a few have reported sales increases to 2001 from between 100 and 400 percent over 2000. OCLC, which provides computer. based cataloguing, reference, resource charging and presentation services to 40,000 libraries in 81 countries and territories are continuing their effort to romp in more authors, libraries, publishers to provide access to users a on a wide variety of subjects and topics.

Courses curriculum are being developed to teach students about the creation and use of PCs, e-books, e-book readers, using the e-library system, how to get e-

books on the Internet and even how to create their e-books. Finally according to Jay Jordan, President of OCLC, *"Electronic books and other forms of electronic content are quickly becoming strategic drivers in the sharing and advancement of knowledge in the digital age."*

In time it might be easy to store every thing from the Internet, Yet if what we leave in the future is a collection of Listserv archives and if we will have not served the future well. However, we might have created a new discipline known as Information anthropology.

Thus as we approach changing the system, we should do so cautiously and thoughtfully. E-publishing must be concerned with the issue of quality as the technologies promise to open a flood gate of quality. For all of its infinite possibilities, e-publishing must deal with these venerable problems.

Emergence of e-publication has brought forward some of the challenges to the profession. These challenges should be taken a opportunities and despite several problems, e-journals are here to stay and professionals should be prepared to handle them. It is the need of the hour that the profession should rise to the occasion by acquiring the latest skills and techniques of emerging information technology.

Librarians have to give importance to the process of electronic publishing and the application of Information technology in it. Thus, the impact of Information technology has affected the Information professionals. It is high time now to seriously start using Internet as a tool for electronic publishing.

CHAPTER: FOUR

COPYRIGHT ISSUES AND ELECTRONIC INFORMATION ENVIRONMENT

INTRODUCTION

Developments in the Information Technology (IT), Electronic Publications and Digital Libraries poses challenges to the copyright holders as well as to the copyright protection in the world over. The basic questions regarding the application of existing copyright law to Electronic Information are raised by authors, publishers, users and other intermediates. There is an urgent need to reconsider the existing copyright law to make it suitable to computer and electronic age. Since knowledge knows no barriers, publications having originated in a particular country can be freely imported to any other country by modern IT. Hence, it is required to formulate copyright regulations at national and international levels. According to the international copyright convention, any work published anywhere is automatically protected by copyright rules throughout the world or at least in those countries which subscribes to the international copyright convention. But in India, the present copyright act is not adequate to deal with the technical advances emerged in the recent past like- photo duplication, facsimile transmission, communication satellites and other devices for the creation, reproduction and dissemination of Intellectual knowledge, make its imminent for reconsideration of the copyright law particularly suitable to electronic information.

The world is indeed on the threshold of information revolution which can transform the lives of people in the north and south bridging the information gap for the good of every one in the Global Village of the future, but will it happen? Can law and politics overcome the invidious obstacles. The problem that is worrying scholars, researches, educators and consumers of modern information is the possible impact that new technologies may have on the copyright law and consequent burdens on the information users.

1. Concept of Copyright :

It would not be out of place at the outset to clarify what is meant by the term copyright. Literally the term, "Copyright" comprises of two factors viz. - "Copy" and "right" that is to say it is the right to copy something what this something is left to be interpreted by the statute. The Encyclopaedic dictionary of literacy and information science defines a copyright as "the right to prevent publication, statute have extended the definition to include the right to prevent multiplication as the form of copies by what so ever means".

Encyclopaedia Britannica writes, "a copyright is the exclusive legally secured right to publish reproduce & sell the matter & form of a literacy, musical, dramatic, or artistic work". Copyright is designed primarily to protect an artist, publisher or other owner against any unauthorized copying or his work". For the purpose of understanding the concept of copyright in the perspective of an information technology era one must first understand the concept of intellectual property.

Origin of the Concept :

The history of the concept of copyright can be traced back to 15th century when this concept was for the first time recognized in the city of Venice. During the 16th century, England adopted this concept. The first statute regarding copyright is the stated of Anne passed in England in 17 to A.D. this regulation proved to be an important land mark in the history of the concept of copyright. This law asserted for the first time, the author's primary right for copy and publication of a literary work. Thereafter similar laws were framed in Denmark (1741) United States (1790) & France (1793), it should be noted that copyright arises automatically. It is created as soon as a particular work. i.e. book, design, document etc is created. No formalities like registration etc are involved and no professional guidance or expertise is needed.

In India, the Copyright act, 1957 which govern the law relating to protection of copyright in India was successfully amended in 1983, 1984, 1992, 1994 and 1999 with a view either to check the loopholes of the principal act or to bridge the gaps created on account of the ever-changing complex scenario⁸ in this field mainly due to rapid technological advancement infringements of copyright has been made a cognizable and non-boilable offence under this law.

Piracy of text books poses a serious threat to publishers which in recent years has touched alarming heights. The tragic fact is that the anti-piracy provisions in the copyright act have not been effective in fighting the growing menace of pirated works. Thus, the lacunae behind the proper and speedy implementation of copyright law is the absence of adequate copyright enforcement mechanism and unsupportive public, who is by and large ignorant of this kind rampant sophisticated theft or is patronizing this kind of activity for their narrow self-interest (e.g. commercial photocopying) and marketing of pirated books).

While copyright is an essential concomitant of the cultural and scientific heritage of mankind, it has a special role in the context of the developing world, particularly in the publishing sector. The absence of its effective implementation will give rise to negative trends like deliberate withholding of works by national writers out of fear of having no legal protection. This will ultimately hinder the growth of indigenous creative writing and publishing. Adherence to international copyright conventions will protect indigenous authors of a developing country like India from unfair competition from works of foreign origin. In the absence of copyright protection in India, national writers of repute whose works may be in great demand abroad might prefer to place their manuscripts with foreign publishing houses who could guarantee such protection in preference to local publishers. Copyright protection is essential to provide incentives to creators (authors) and to their associates (publishers) who disseminate their works. However, the advent of internet and e-commerce and the recent enactment of the information technology act, 2000 may pose new challenges in the era of digital age.

2. Copyright : General Information :

Legally speaking, copyright means the exclusive right to do or authorize others to do certain acts in relation to :

- 1) Literary, dramatic or musical works.
- 2) Artistic work.
- 3) Cinematograph film and
- 4) Sound recording.

Basically copyright means the right to copy or reproduce the work in which copyright subsists.

Meaning of Copyright

Section 14 of the copyright act, 1957 means, the exclusive right subject to the provisions of this act to do or authorize the doing of any of the following acts in respect of a work or any substantial part thereof, namely –

In the case of a literary, dramatic or musical work, not being a computer programme-

- I. To reproduce the work to the public not being copies already in circulation.
- II. To issue copies of the work to the public not being copies already in circulation.
- III. To perform the work to the public not being copies already in circulation.
- IV. To make any cinematograph film or sound recording in respect of the work.
- V. To make any translation of the work.
- VI. To make any adaptation of the work.

- VII. To do. In relation to a translation or an adaptation of the work, any of the acts specified in relation to the work in sub clauses (I) to (VI).
Explanation- for the purpose of this section, a copy which has been sold once shall be deemed to be a copy already in circulation.

i. Illustration

If a person writes a book, then he has the exclusive right of production and publication of the book. This right may encompass making copies of the book or adapting it to a cinematograph film or issuing copies to the public or performing it before public or translating it or its broadcasting.

ii. Works

According to section 2(y) of the copyright act, 1957, the term "works" means any of the following namely-

- 1). A literary, dramatic, musical or artistic work.

Example : A novel by Sarat Chandra (literary work).

An original painting by M.E Hussain (artistic work).

A play "Hamlet" staged in an auditorium (dramatic work).

A musical note by Hariprasad Chaurasia (musical work).

iii. Adaptation

Adaptation in relation to literary work means the conversion of the work into a dramatic work by way of performance in public or otherwise. Any abridgement of the work or any version of the work in which the story or action is conveyed wholly or mainly by means of pictures in a form suitable for reproduction in a book, or in a newspaper, magazine or similar periodical. Further, in relation to any work, any use of such work involving its rearrangement or alteration.

iv. *Author*

In relation to a literary work or dramatic work 'author' means the author of the work.

In relation to any literary, dramatic, musical or artistic work which is computer generated, the person who causes the work to be created.

Thus the author is the person who actually writes or completes the work in question although the idea of the work may have been suggested by another.

A work of joint authorship means a work produced by the collaboration of two or more authors in which the contribution of the other author or authors.

v. *Publication*

It means making a work available to the public-

- I. By issue of copies or
- II. By communicating the work, to the public.

vi. *Works in which Copyright subsists*

As per section 13 copyright subsists in the works (original, literary, dramatic etc). The following conditions are necessary-

- I. Published work : the work is first published in India, or where it is first published outside India at the date of publication, or in a case where the author was dead at the date of publication he was a citizen of India at the time of his death.
- II. Unpublished work : where the work is unpublished the author is a citizen of India or domiciled in India at the date of making of the work.

In the case of joint authors the above conditions must be satisfied by all the authors of the work.

These conditions do not apply to foreign works or works of international organizations.

vii. Ownership of Copyright

The author of a work shall be the first owner of the copyright therein. However, this is subject to the following exceptions, namely-

If he in the course of his employment by proprietor of a newspaper, magazine or similar periodical under a contract of service or apprenticeship, for the purpose of publication in a newspaper, magazine or similar periodical, the said proprietor, in the absence of any agreement to the contrary, will be the first owner of the copyright in the work in so far as the copyright relates to the publication of the work in any newspaper magazine or similar periodicals or to the reproduction of the work for the purpose of its being so published.

But in all other respects the author shall be the first owner of the copy right in the work, or

- II. The author may transfer his copyright (wholly or partly) of an existing work or future work by a document in writing to another person, which is called "Agreement".

viii. Term of Copyright

The duration of copyright in any literary, dramatic etc work published within the lifetime of the author is up to 60 years from the beginning of the calendar year (i.e. year commencing on 1st January) next following the year in which the author dies. In case of a work of joint authorship, it is to be continued as a reference to the author who dies last.

In the case of copyright in an anonymous or pseudonymous work copyright shall subsist until 60 years from the beginning of the calendar year next following the year in which the work is first published.

Example : an author died on 15-11-1995 then the duration of copyright of his work which was published for the first time in 1994 is upto 60 years from the 1st January 1996 (i.e. the copyright will expire on 31st December, 2056).

ix. Licences

Any person may approach the owner of copyright in any existing work or the prospective owner in any future work to execute a commercial arrangement for a royalty payment in order to obtain a licence to exploit the work of a copyright owner.

On refusal to re-publish a work in any manner withheld from public, a complaint can be made to the copyright board under section 31 of the Act and on being satisfied the board may grant a licence to the complainant. The copyright board may also grant licence under section 31-A in the case of Indian work, the author of which is dead or unknown or cannot be traced or owner cannot be found. Section 32 lays down the procedure for grant of licence to reproduce and publish works for certain purposes.

x. Preparation of agreement

The copyright can be assigned from author to publisher or publisher to publisher.

The mode of assignment of copyrights is governed by section 19 of the copyright act, 1957.

This section after being amended by act 38 of 1994, lays down the following ingredients of assignment.

- I). The agreement shall be in writing.
- II). The agreement shall be signed by the assignor or his duly authorized agent.

- III). The agreement shall specify the amount of royalty payable.
- IV). The agreement shall specify that the agreement is subject to revision, extension or termination or terms mutually agreed upon by the parties.
- V). The agreement shall specify the time period within which the book, copyright of which is assigned, will be published if no such time is specified it will be deemed as one year from the date of assignment and thus if a publisher is unable to publish the book in one year the author or assignor has the right to revoke the agreement.
- VI). The agreement shall specify the period for which the assignment is made and if it is not mentioned it shall be deemed to be five years from the date of assignment.
- VII). The agreement shall specify the territorial extent of assignment and if it is not specified it shall be deemed to extent within India.

xi. Infringement of Copyright

The owner of the copyright has the exclusive right in respect of the reproduction of the work and such other acts which enables the owner to get financial benefits by exercising such rights. If any of these acts relating to the work is carried out by a person other than the owner without a licence from the owner or competent person/authority under the copyright act, 1957, it constitutes infringement of copyright in the work.

Example : A book seller who is selling or displaying the unauthorized copies of the book.

xii. Piracy

It is a kind of illegal activity which has been caused by the rapid technological advancement. Latest techniques of photocopying and printing have made it easy to produce unauthorized copy of a book within a short span of time at a relatively low cost on a large scale. This offence deprive the author of the work from setting his legitimate due and

ultimately hampers the growth of original and creative work by the pursuit of hard work and intellectual skill and national economy as well.

xiii. Foreign works

India is a member of the Berne Convention (1886) for the protection international copyright which is being administered by World Intellectual Property Organisation (WIPO) and of the Universal Copyright Convention (UCC) held in 1952 which is being administered by United Nations Educational, Scientific Cultural Organisation (UNESCO) and also World Trade Organisation (WTO) which regulates agreement on Trade Related Intellectual Property Rights (TRIPS). Thus, even if the copyright where is a national or resident of foreign country (if the country is member of any of the two conventions) or (WTO) his work is automatically protected on reciprocal basis. As per the provisions of the international copyright order, 1991 foreign work is also protected in India.

xiv. Copyright Societies

Any association or persons, whether incorporated or not comprising or more owners of copyright (the applicant) formed for the purpose of carrying on business of issuing or granting licence in respect of any class of work in which copyright subsists or in respect of any other right conferred by the act may file with the registrar of copyrights an application for submission to the central govt. for grant of permission to carry on such business and for its registration as a copyright society.

xv. Conditions for Registration

When an application for registration of a copyright society is submitted to the central govt. through the registrar of copyrights, that govt. may, within 60 days from the date of its receipt by the registrar of

copyright will register the applicant as a copyright society, if the following conditions are fulfilled, namely-

- a) The applicant has professional competence to carry on its business or has sufficient funds to manage its affairs, or
- b) There does not exist another well functioning copyright society registered under the act for administering the same, class of works, or
- c) The central govt. has reason to believe that the members of the applicant society are bonafide copyright owners or they have voluntarily signed the instrument for the setting up the society and the application for registration. The application is found to be complete in all respects. But no such application shall be rejected for want of any of the above mentioned conditions without giving the applicant an opportunity of being heard.

xv. Documents accompanying the application

Every application is made for the purpose should be accompanied by following documents-

- I). A true copy of the instrument by which the applicant is established or incorporated.
- II). The consent in writing of the individuals named in the application to as members of the governing body of the applicant.
- III). A declaration containing the objectives of the applicant, the bodies through which it will function and arrangements for accounting and auditing.
- IV). An undertaking to the effect that the instrument by which the application is established or incorporated.

xvi. Enforcement of Copyright

For this purpose it is necessary to have-

- I). A comprehensive legislation with strong measures against any kind of copyright violation.
- II). An effective enforcement mechanism to enforce these provisions.

xvii. Copyright Legislation

The Principal act (copyright act, 1957) was amended in 1984 to incorporate anti-piracy legislation to check widespread piracy of books etc. and it has been made a cognizable and non-bailable offence.

The punishment for various offences has been enhanced by amending sections 63 and 65 and by inserting new sections 63A and 63B.

xviii. Relevant extracts of Law relating to committing an offence

Section 63 : Any person who knowingly infringes or abets the infringement of the copyright work shall be punishable with –

1. imprisonment for a term which shall not be less than 6 months but which may be extended up to 3 years;
2. fine of not less than 50,000/- but may be extended up to Rs. 2 Lakhs.

Section 63A : The quantum of enhanced penalty on second or subsequent conviction shall be –

1. imprisonment for not less than 1 year but up to 3 years; and
2. fine of not less than Rs. 1 Lakh but may be extended up to Rs. 2 Lakhs.

Section 63B : The quantum of penalty for the offence of knowing use of infringing copy of computer programme shall be –

1. imprisonment for not less than 7 days but up to 3 years; and
2. fine of not less than 50,000/- but may be extended up to Rs. 2 Lakhs.

Note : If the infringement has not made for gain in the course of trade or business the court may reduce the punishment by mentioning adequate and special reason in judgement.

Section 63 : The quantum of penalty for an offence of possession of plates for purpose of making infringing copies shall be, -

1. imprisonment up to 2 years, and
2. fine (not specified).

Section 67 : The quantum of penalty for an offence of making false entries in register, etc, for producing or tendering false evidence shall be, -

1. imprisonment up to 1 year, or
2. fine, or
3. both.

Section 68 : The quantum of penalty for offence of making false statement for the purpose of deceiving or influencing any authority or officer shall be,

1. imprisonment up to 1 year, or
2. fine, or
3. both.

More powers have been given to the police for prompt action and speedy apprehension of the offender by amending section 64, as any police officer not below the rank of Sub-Inspector may seize without warrant all infringing copies or the work if he is satisfied that the offence is under section 63 in respect of the infringement of copyright. The Economic Offences (Inapplicability of Limitation) Act, 1974 was amended by incorporating in the Schedule the clause (a) of section 63 of the Copyright Act, 1957 which declared infringement of copyright as an economic offence.

A new section 63B was inserted by Amending Act of 1994 to incorporate penalty provisions for knowing use of infringing copy of computer programme to be an offence.

xix. Enforcement Mechanism

- a) *Jurisdiction of Court* – District Court, High Court (having Original Jurisdiction) have a jurisdiction to try the suits relating to copyright violation within the vicinity of which the owner of the copyright resides or carries on business [Refer section 62].
- b) *Role of Police* – Police can be helpful in the following ways.
 - i In case of a complaint regarding infringement of copyright is made, all relevant details should be elucidated from the complaint and the case should be subsequently registered.
 - ii An immediate raid may be conducted at the suspected/ reported places or premises.
 - iii A thorough search can be made of the place and a proper record have to be prepared of seized articles during the raid. Proper care have to be taken to prevent evidence from being destroyed.
 - iv The seized articles and arrested persons should be produced before the court of competent jurisdiction.
 - v The investigation of the case should be cautiously completed within short span of time and follow-up preventive actions have to be taken wherever required after finding out the exact person/agency/behind the infringement of copyright.

3. Copyright issues in Electronic Information Environment :

Copyright is an economic system for ensuring the creation of new knowledge by rewarding their creators and their agents; (it provides) an assurance that the creator can determine, if, how, where, when and in what from his or her creation can be used.

From the copyright point of view, printed material has certain advantages over the electronic information: it is permanent and authenticated, its ownership is easy to ascertain, its facilities easy identification of piracy or plagiarism. In comparison, electronic (digital) information is not so permanent; it is easy amenable to revise, modify, re-revise, re-modified without leaving any resemblance to the original. However electronic information facilitates more exhaustive searching, faster information retrieval, better storage and cheaper maintenance in addition to the saving in stacking, ease of use and transportability. It is amenable to cost-effective processing, communication and attractive especially for archival purpose since large volumes of data can be copied across different storage media without any loss of quality.

More recently, copyright has also been applied to the computer software including software encoded on microchips. Computer programmes generate abstracts and create databases. The programmes are copyrightable, but questions exist who owns the generated text? The idea that a machine is capable of intellectual labour is beyond the scope of copyright. The copyright protection for computer programmes centres on video displays and ROM microchips have recently been challenged by courts in US. The courts found that, if the creator of the chips and video displays fulfill the requirement for registration, deposits and copyright notices, the copyright is valid and may be defended by the court of law. But the details must be resolved through legislations. Digital information can then be stored on a server and transmitted over networks in a few minutes to multiple destinations simultaneously. An important concern of electronic information available over or accessed through networks like INTERNET is its vulnerability to manipulations, additions, deletions. Etc. this may raise problems of authenticity and reliability of electronic data. Further, these cannot be closely monitored or their use cannot be restricted as in the case of printed journals. These may result in plagiarism, authorship conflicts and impersonation. To facilitate compliance with the US Copyright Law, a group of users, publishers and authors together established the CCC in 1977 as a non-profit organization to operate a

centralized a authorizations and payment system for the use of publications, and to serve both the foreign and domestic copyright owners.

In the context, the Indian copyright Act with its amendments of 1994 is seen as a deterrent to the illegal copying and piracy of software. Although making of copies of adaptation of a computer programme by the lawful possessors does not make an infringement if the copies are made in order to utilize the computer programme for the purpose for which it was supplied, or to make backup copies purely as a temporary protection against loss, destruction or damage in order to only use the same for the purposes for which it was supplied.

Digital library makes the copyright protection a difficult task. It is easy to create digital or digitized copies of the texts, photographs, music and video which results in revenue losses to the copyright owners who not get returns when copyright violations (illegal copying) take place. To avoid this situation, they are bound to impose stringent copyright rules and mechanisms. Determining how to charge a digital library for the use of on-line digital electronic information including reference work is a challenge. When co-operative acquisition and inter library loan are being followed by a group of libraries, this issue becomes even more problematic. The copyright (Amendment) Act, 1994 enlarged the scope of the term 'author' to mean in relation to any literary, dramatic, musical or artistic work which is computer generated, the person who causes the work to be created. The enlargement of the meaning of the term author makes the creators of the computer generated library, artistic, dramatic and musical work covered under the ambit of copyright. The storage and retrieval system enable storage of complete texts of books, periodicals, etc. in the database which can be retrieve at the flick of the finger. After through and prolonged debates at international forums, computer programme (software) has been accepted as a 'work' in the copyright senesce and is eligible for protection under the copyright law. Under copyright law of the USA, software is registerable as a literary work for copyright protection. It is apprehended that in the coming decades, the storage and retrieval system might bring about the revolutionary change in the publishing sector

when it replaces, to an extent, the printing press. as input is considered reproduction, copyright conventions have viewed that the use of copyright materials in a computer requires the prior permission of the copyright owner. How does the copyright owner control the use of his work stored in the computer memory is engaging the attention of technologies, copyright specialists and jurists at the international level.

The usage statistics collection and management system being developed by ELINOR (Electronic Library and Information Retrieval On-line) electronic library product at Milton Keynes (UK) to analyses two types of statistics. The first time is for the publisher concerning the number of pages browsed, time spent and the number of pages viewed and printed by the Users. The second type statistics relate to maintain users accounts monitor and find out the heavily used documents, and to know the user reading patterns. Many digital libraries projects, in association with publishers and copyright holders, are exploring ways and means to ensure copyright clearance procedures, licensing and payment mechanisms. India and UK laws extend the copyright protection to computer databases, treating them as literary works Multimedia works classified under audio visual works are covered, through not explicitly, by the USA, UK and Indian laws. The Indian law extends protection to computer programmes i.e., computer software and computer-generated artistic or literary works, and treats storing of a work in any medium by electronic means as infringement of the copyright. the law has no provisions for electronic and on-line books, journals and electronic information. In India, such provision was made under section 33 to 36 of the Indian Copyright (Amendment) Act, 1994, which enumerate registration of copyright societies, administrations of rights of owners, payment of remuneration, control over the society by the owners of the rights, submission of returns and reports, and rights and liabilities of performing rights societies.

3.1 Electronic Copyright Management Information Systems

Several Electronic Copyright Management Systems (ECMS) are under various stages of progress like – PATRON (Performing Arts Teaching Resources

Projects On-line), CNRI (Corporation of National Research Initiatives) and ARP (Advanced Research Projects Agency). They are currently working on the design and implementation of an ECMS. The project uses digital signature technology and privacy-enhanced e-mail which may facilitates the development of high performance, interactive digital library. The CCC (Copyright Clearance Centre) is closely working with publishers, users and Universities where several pilot projects are underway to provide owner-authorized, text-based information electronically. Publishers of scientific and technical journals have been seized up in the copyright and licensing issues. For example, ACM interim copyright policies of the Association for Computing Machinery covers works published in digital form also. ACM has an ambitious electronic publication programme where in they would like to offer all the primary journals online. The University Licensing Programme (ULIP) pursued by Elsevier Science Publishers in association with OCLC and some of the Universities in the USA is exploring the electronic access to 45 primary journals in the field of materials science. Copyright policing and handling of royalties is an important aspect of digital information environment. There are different licensing schemes-per-transition fee, fixed fee, usage-based fee or a combination of any these. An ECMS with management capabilities was conceived at De Montfort University, the Electronic Reserve Copyright Management System (ERCOMS) is expected to include automated rights clearance system for handling electronic permission request, full tracking of usage and accountability automatic counts of occurrence of copyright events, and copyright management. Although the electronic information can be protected through encryption during transmission over networks, once it is decoded at the end (for usage), it is amenable to manipulation. Further, even if the publishers (or copyright holder) does not offer the work in electronic form, the users can always convert it into digitized or digital form using scanners and OCR technology in a short time.

3.2 Copyright in Computer Programmes – India

The Copyright Act of 1957 has been last amended by the Copyright Amendment Act, 1999 and the amendments that have been made are intended to streamline the law relating to Copyright of computer software which prior to the Act of 1999 was merely included in the definition of “literary work”. The amendment brought by the Act of first define “computer” to include any electronic or similar device having information processing capabilities. It define “computer programme” as a set of instructions expressed in words codes, scheme or in any other form, including a machine readable medium, capable of causing a computer to perform a particular task or a particular result.

In the case of a computer programme copyright means to do or authorized the doing of any of the following acts –

- Reproducing the work in any material from including the storing of it in any medium by electronic means;
- Issuing copies of the work to the public not being copies already in circulation;
- Selling or giving on commercial rental a copy of the work and because “literary work” as defined includes computer programme, tables and compilation and computer data bases, copyright in a computer programme subsists for the time of the author and sixty years.

A computer programme is infringed when any person without license granted by the owner of the copyright does anything the exclusive right of doing which is vested in the owner.

However, a computer programme is not infringed by the making of copies or adaptation of a computer programme by lawful possessor of a copy from such copy in order to utilize the computer programme for the purpose for which it was supplied or to make back up copies purely as a temporary protection against loss,

destruction or damage only to utilize the computer programme for the purpose for which it was supplied.

By the same token it will not be infringement -

- a) To do any act necessary to obtain information essential for operating interoperability of an independently created computer programme with other programmes by a lawful possessor of a computer programme provided that such information is not otherwise readily available;
- b) To observe, study or test the functioning of the computer programme in order to determine the ideas and principles which underline any elements of the programme while performing such acts necessary for the functions for which the computer programme was supplied ; and
- c) Making copies or adaptation of the computer programme from a personally legally obtained copy for non-commercial personal use;
- d) Reproduction of a computer programme for the purpose of a judicial proceeding.

The principles propounded in the Act leave many grey' areas. As it well-know copyright lies in the expression of an idea and not in the idea itself. On general principles it is now established at least in American jurisprudence that copyright protection covers both a programmes source and object codes. The language of the Act also clearly propounds that exact copying of a computer code infringes the programmer's copyright in the code. The question that remains unanswered by the Act whether is a person, without infringing copyright, may copy the underlying structure, sequence or organization of the programme.

3.3 Protections of Software and Data :

Organizations are very careful to protect their data. This includes educating employees and makes back-up disc, protecting against and so on -

3.3.1 CD-ROM :

According to the section 2(0) of the Copyright Act, 1957 "Literary work" includes computer programmes, tables and compilations including computer databases. Thus, CD-ROMs are protected under the provisions of copyright law.

3.3.2 Internet & Web Page :

When a person browsing the Internet access a web page, he or she downloads the pictures and the text on that page onto his or her computer. By making a copy of this page in the computer's RAM, on the hard drive and on the screen, the browser has violated the author's exclusive right to reproduce the page but this has an exception that if the matter downloads is for public information, one can even reproduce the same with due acknowledgement.

Since it is easy to create web page, these are also rife with copyright violations. Whenever any one place downloaded images or text on his or her web page, there is potential violation of the copyright owner's exclusive right in that material. Section 2(0) of the Copyright Act, 1957 is applicable to web pages, being the computer database.

3.3.3 Domain Name :

Domain name is an address in Cyberspace. Many disputes have arisen and foreseeable because of similar names. Example <universalbook.com> and <universalbooks.com> looks same and confusing for the customer accessing the webpage. Such disputes are at present not maintainable because of lack of specific legal remedy under the Trade Marks Act, 1999 but passing off action can be taken under Civil Procedure Code, 1908.

World International Property Organisation (WIPO) has been solving these problems which are arising on international level concerning different countries. The recent results of WIPO negotiation was that the domain names <the economic times.com> and <the Times of India.com> were given back to the Indian publishers of the newspapers.

3.3.4 Computer Programmes :

Computer Programmes are part of definition of literary work under section 2(0) of the Copyright Act, 1957. There is a lot of controversy and debate, internationally on the point that whether computer programme fall under copyright or patent law. As of now the programme individually falls under copyright law and if the programme is part of computer hardware as a whole, it can be patented.

3.4 Some Legal Issue regarding the Creation of a Web site

There are major issue regarding the creation of a web site which are discussed under following points –

1. Copyright concerns;
2. Domain name concerns;
3. Trademark concerns;
4. Defamation; and
5. Linking and framing.

3.4.1 Copyright concerns :

At the time of creating a web site, we may violate the copyright act unknowingly because we don't know the rights of a web page owner. Some rights have been exclusive given to copyright owners under the copyright Act. Included in those rights are the right to prevent others from reproducing (or copying) a work, publicly displaying a work, or distributing a work. As a result, web page authors should take care not to copy the work of others. an

Internet service provider can also be found liable for copyright infringement even when they are not directly engaged in the copying the protect materials.

3.4.2 Obtaining images for a web page :

One of the important attractions of the World Wide Web is the ability to use graphics to convey information to users. A sophisticated and subtle graphical presentation is the hallmark of some of the Web's most popular sites. The following "rules of thumb" are meant to guide a web page creator when selecting images for incorporation into a page.

3.4.3 Creating originals images from drawing and painting programs :

It is very safe to obtain images is to create them in a drawing or other images creation program. In doing so, however, it is best to start from scratch rather than from someone else's creation. Even if an image is significantly altered, the new image may infringe upon the copyright in the first image may infringe upon the copyright in the first image by being a "derivative work".

3.4.4 Copying images from third-parties :

Don't steal someone else images. The moment an original image (or string of text) is fixed on a hard drive for the first time, it is protected by copyright. any unauthorized copying of a protected image is an infringement of the creator's , unless the use falls within one of the very limited exceptions to the copyright law, such as "fair use". In most cases, it is unlikely then the incorporation of an image into a commercial web-site would be considered a fair use.

3.4.5 Licensed images from the Internet :

Some images, such as Microsoft's "Internet Explorer" logo, may be copied, but only if the would-be copier accepts the term of license defining the permissible uses of the image. Often such licenses provide that the copier

cannot alter the appearance of the image in any way, and may use the image as a link only to certain designated sites.

3.4.6 Clip-art Libraries Provided with Software :

Other sources of licensed images include clip-art files, such as those provided with Claris Home page, Microsoft Front Page, Tripod and Adobe Page Mill software. Incorporating clip-art from these libraries into a page does not violate copyright law, as these images are licensed to the purchaser of the software for this purpose. To avoid liability, however, a webmaster must be careful to obey the terms of all applicable license agreements. For, instance, the license may not allow a user to alter the images in any significant way.

3.4.7 Free Images of the Internet :

Some web sites provide images that are for use by others. These images may be used in a web page, as long as the terms proposed by the image creator are followed. Typically, this site only requires that some type of credits is given to the author, including a link back to the author's site. However, there remains the possibility that the images were misappropriated at some point infringe the copyrights of the original author.

3.4.8 Developing text for a web page :

The guide line for text development are similar to those for obtaining images. Truly original text, development by the creator of the web site, may be used without copyright concerns. As with images, appropriating text from third parties without permission is illegal, unless there is some substantial "fair use" justification for the taking. Use of third party text pursuant to a license agreement should follow the terms of the license agreement. As for public domain works, one should never assume a work is in the "public domain" without independent investigation.

3.4.9 Developing Java Applets ;

This is normally a violation of copyright law to appropriate scripting or programming from someone else without permission. Many parties have made their scripts and applets available for use by the public. In these cases, use is allowed as long as any requirements set forth by the programmer are followed.

3.5 Domain Name concerns :

The selection and protection of a domain name may be the most important detail in the creation of a web site. Domain names function as the address for a web site, and dispute over domain names have become more common and more controversial as the popularity of the Internet grows.

3.5.1 Selection a Domain name :

Domain names have a first and second level. The ".com" portion is considered the first or top level domain name, and "second" is considered a second level domain name. The most common top level domain (.COM, .ORG, .NET, .GOV, .EDU) names are administered by Inter NIC, although other top level domains are available and still more will be available soon. To obtain a domain name using one of these top level domains names, a search should be done to make sure the name is not taken. In addition, it may be wise to perform a trademark search to verify that the chosen domain name is not infringement on another party's trademark.

3.5.2 Reclaiming a Domain Name Registered by Another :

Searching for a domain name, a web master may discover that someone else has already taken their corporate name or trademark as a domain name. In most cases, there is little that can be done because the other party has equal right to use that name. in some circumstances, however, it is possible to contest a registered domain name based upon superior rights to that name. Such a contest can be made through the courts or through Inter NIC's domain name dispute policy.

3.5.3 Protecting a domain name

In order to better protect a domain name and to avoid losing a domain name under the Inter NIC domain name dispute policy, a domain name owner should obtain a trademark registration on their domain name. In order to obtain immediate protection, a registration can be obtained.

3.5.4 Obtaining Multiple Domain Names under Different Top Level Domains

The owner of a strong trademark can obtain multiple domain names registrations under multiple top level domain names.

3.6 Trademark concerns

A trademark is a word, image, slogan, or other device designed to identify the goods or services of a particular party. Trademark infringement occurs when one party utilizes the mark of another in such a way as to create a likelihood of confusion, mistake and/or deception with the consuming public. The confusion created can be that the defendant's products or services are the same as that of the trademark owner, or that the defendant is somehow associated, affiliated, connected, approved, authorized or sponsored by trademark owner. Since most web sites will contain discussion of products or services, web site developers should be aware of the potential trademark issues.

3.6.1 The Trademarks of others

There is nothing inherently wrong with the identification of other party's products on a web page by using their trademarks. Nonetheless, some parties have made inappropriate claims of trademark infringement every time they see one of their marks on another party's page. Sometimes, however, a website does violate the trademarks of another. Web page designers should avoid trademark usage that might cause confusion among viewers as to the source or sponsorship of the web page. Such use might well constitute trademark infringement.

3.6.2 Linking to another page through that party's logo

It is common to find a link to another web page made through a company's name, or logo. In most cases, this type of link will not cause trademark concerns unless the use causes the type of confusion discussed above. However, the use of another party's logo without their permission may be more likely to raise the type of confusion that creates trademark infringement, since a graphical logo arguably creates a stronger impression of affiliation than mere text.

3.6.3 Selection of a trademark

To select a trademark, one should consider the relative strength of the mark. Certain marks are stronger than others. Made up words, such as Kodak or Xerox make the strongest marks. The next strongest marks are those words that have no relationship with the products or services on which they are used, such as APPLE for computers. Marks that are descriptive in nature, such as CLEASCREEN for computer monitors, may be so weak that they will not function as a trademark until they have been heavily used. After picking a mark, a trademark search should be performed to make sure that no one else has rights to the mark.

3.6.4 Protecting a trademark

Once a mark has been selected, the best way to protect a mark (in the United States) is through a federal trademark registration. If the goods or services sold under the mark will be sold internationally, trademark registrations in other countries should also be considered.

3.6.5 Defamation

The term defamation refers to a false statement made about someone or some organization that is damaging to their reputation. For a statement to be defamatory, the statement must be published to a third party, and the person publishing the statement must have known or should have

known the statement was false. The law of defamation is complex, as it has been determined by numerous court decisions rather than one national statute. In addition, a claim of defamation is subject to a variety of defense, such as the first amendment and (of course) the defense that the statement was true. Because of the complexity of defamation law, a full explanation of this area will not be set forth here, and is saved for others to provide.

While the Internet provides a new context in which a defaming statement can be made and published, there is little new law relating to Internet defamation other than liability for service providers. Nonetheless, web page developers must be careful to avoid defaming someone in their pages. If a statement is being made that they damage the reputation of a person or organization, care should be taken to make sure that the statement is not defaming.

3.6.6 Linking and framing concerns

Links between pages are the necessarily of the World Wide Web. Without widespread linking, the web as we know it would not exist. Nevertheless, there are questions about the legality of such connections. When the image from another web site is incorporated into one's own page by means of an unauthorized IMG link, there is no direct copying by the creator of the link. Nonetheless, when the visiting browser retrieves the image from the other web site and combines it with the text on the current page, the creator of the web site may be guilty of contributory copyright infringement for creating a derivative work. Consequently, one should not include links to images found on another party's web site without first getting permission. Frames could be used to divide a browser into two parts, with one part containing an index for the web site and the second containing content pages. While this type of use is perfectly legal, problems can arise if a frame is used to show pages from two web sites at the same time. The use of frames in this way can mislead the viewer of a site as to the creator of its content, possibly raising issues of

copyright infringement, passing off, defamation, and trademark infringement, just like the linking situations described above.

4. Cyber Crimes :

The rapid developments in computer and telecommunications and other technologies has lead to grown of new forms of crimes. The potential extent of cyber crime is as broad as the extent of the international communication systems. Cyber crimes have virtually no boundaries and door may affect every country in the world. There are a large number of definitions for cyber. The simple definition is "unlawful acts where in the computer is either a tool or target or both.

Let us examine the various cyber crimes.

4.1 Money Theft :

Many cyber involve the theft of money. This is a threat to every organization. The scope of such financial losses is much larger than the incidents reported. Most companies don't reveal that they have been either victims of cyber crime. They fear the customers and shareholders.

4.2 Service Theft :

The unauthorized use of computer and internet is called service theft. Network monitoring software called 'Sniffen' is frequently used in monitor network traffic to evaluate the network capacity as well as reveal proof of misuse also.

4.3 Software Theft :

Computer programs are valuable property Unauthorized copying of software in software piracy is also a major issue of software theft. Unauthorized copying is illegal software is intellectual property that is protected by copyright law and user licensing agreement. We need to consider three copyright related matters. Software network piracy. Plagiarism and ownership of images sounds and

the other media. Network piracy is using electronic networks to distribute unauthorized copyrighted materials in digitized form. Piracy tends to increase prices if you use the pirated copies, you will face the following problems getting up-to-date versions; available to get help; Risk of getting a virus; and risk of getting caught. Plagiarism is exploration of another writer's text findings etc. Manipulation of sounds, images and video are also included in this category.

4.4 Hacking :

Hacking is a generic expression. A hack is a quick fix or clever solution to restrictions. Hackers are people who gain unauthorized access to computer or telecommunication system for the challenge or even the principle of it. A hacker's greatest asset is that he can easily transcend all physical barriers. According to NASSCOM chief Dewang Mehta – "The concepts of countries has no meaning for a cyber criminal". Hackers who broke into BARC were traced to have roots in England. Hackers are also helped by the fact that most countries are yet to come up with laws to counter cyber crimes. Hackers use the 'Sniffer' programs which sat silently within the computer for four weeks monitoring its activities. This could allow the hackers to give unauthorized access to every computer on the networks.

4.5 Cracking :

Crackers also gain unauthorized access to IT, but do for malicious purpose. Crackers attempt to break into computer and deliberately obtain information for financial gain, shut down hardware, pirate software or destroy data.

4.6 E-mail spoofing :

A spoofed e-mail is one that appears to originate from one source but actually has been seen from another source. Spoofing the mails could spoil the people's relationships. These kinds of e-mail can cause monetary damage also.

4.7 Cyber stalking :

Stalking means "pursuing stealthily". Cyber stalking involves following a person's movements across the internet by posting messages on the bulletin boards frequented by the victim entering the chat rooms frequented by the victim, constantly bombarding the victim with e-mails.

4.8 Data Diddling :

This kind of an attack involves altering the raw data just before it is processed by a computer and then changing it back after the processing is completed. Electricity Board in India have been victims to data diddling programs inserted when the system were being computerized by private parties.

4.9 Pornography :

The pornography is the output of abuse of computers. A lot of people use it to communicate about sex 'Yahoo', the internet Directory company says that the word "sex" is the most popular search word on the net. A special problem is that children may participate in sexual conversations, download hard-core pictures encounters odious adults tempting them a meeting. Many companies are concerned about the loss of productivity and the risk of sexual harassment as workers spend time online looking at sexually explicit materials.

4.10 Some possibilities to prevent these incidents :

4.10.1 Blocking the software :

Some software developers have discussed a golden opportunity in making programs like 'Surf watch', Net Nanny' and 'Cyber Patrol'. These filters screen out objectional matters. And in the case of children some programs also prevent kids from giving out personal informations such as address and credit card numbers.

4.10.2 Browser with rating :

Another method provision in browser software that contains bulletin ratings for and www files. Parents could choose a browser that has been endorsed by the Online Server Provider. Special browsers include 'ChiBrow', 'Kid Desk' and 'Surf Monkey'.

4.10.3 Spasm and Virus threat :

One such threat is unsolicited electronic mail, already burdened by dozens of legitimate e-mail message daily, and workers can find themselves with junk mails known as Spam's.

Another threat by misuse of technology is virus. A virus is a piece of computer code or program that is hidden within an existing program. Virus attacks are in different forms. Some virus just produce fanciful message such as "happy birth day Dippu" on your screen. Some virus has the power to format your system within seconds. Viruses are passed in two ways by disc and networks. Virus may take several forms, the three main ones are : Boot sector viruses, file viruses; and multipartite viruses. A more recent one is the macro virus, which attacks the documents rather than programs. E.g.: Laroux.

4.10.4 Boot Sector Viruses :

The boot sector is that the part of system software containing most of the instructions for booting or powering up the system. The boot sector virus replace these boot instructions with some of its own. Once the system is in turned on, the virus is logged into memory before start of the operating system.

Example of boot sector virus is 'Ant Cmos', 'Anti EXE' and 'NYB'.

4.10.5 Antivirus :

The tool for protecting your system from computer viruses is to install and use anti-virus software. Verities of virus fighting programs is available in the market. Across the web we will find many companies selling anti-virus software. Two of the best known and most commonly used anti-virus programs

are 'Norton Anti-Virus' and 'McAfee Virus scan'. You can use virus protection software in one of two ways. First, when another user gives you a disk or file you can run your protection software and direct to scan the file for viruses. If the software detects a virus, it will ask you how you want it to proceed. Most virus protection software can delete the file or possibly remove the virus from the program. You can also direct most virus protection to run continuously so that the software scans each file you plan to open, run, save, and so on.

4.10.6 Multipartite Viruses :

Multipartite Virus is a hybrid of the file and boot sector types. The multipartite Virus infects both files and boot sector, which works better at spreading and more difficult to detect. E.g. : 'Junkie', 'Parity Boot',

4.10.7 Micro Virus :

Micro virus take advantage of a procedure in miniature program known as macros, are embedded inside common data files such as those created by e-mail or spread sheets. Micro virus are sent over computer network, until recently, such document has typically been ignored by anti-virus software.

E.g : 'Concept' with Word document.

'Laroux' with the Excel document.

4.10.8 Logic Bomb :

Logic bomb differ from other virus in that they are set to go off at a certain date and time.

E.g : Chernobyl Virus

4.10.9 Encryption

PGP is a computer often used for encrypting a computer message pulling them into secret code. Encryption or enciphering is the altering of data so that it is not usable unless the changes are undone. PGP (Pretty Good Privacy) is good that it is practically unbreakable. It can be downloaded from

<http://nai.com>. Other encryption software's are available are such as SynCrypt. When you encrypt something, you scramble it, to decrypt it you unscramite it. Both activities require a key, like password. Encryption is clearly useful for some organizations especially those concerned with trade secrets, military matters and other organizations.

4.10.10 File Virus

File virus attach themselves to executable files those that actually begin a program while it is run. The virus starts working get into main memory and infect other files.

5. Copyright Piracy in India :

5.1 Copyright and National Economy :

Besides protecting creative potential of the society, copyright contributes to a nation on economic-front as well. The copyright based industries together generate huge employment in the country of its origin. The national exchequer benefit from the contribution made by these industries in the form of excise duty, sales tax, income tax etc. from the production and sale of copyright products. Given the natural demand for such products from across the national boundaries exports help consolidate country's foreign exchange reserves position.

While there is no view on the economic importance of copyright, it is not easy to assess it property. The first and the foremost difficulty arises in defining the copyright based depends on copyrighted materials for their commercial success. But the range of activities that come under the subject of copyright is so wide that the task of defining the copyright industry become difficult. These industries are drawn from a large number of different industry classifications and they are also not readily identified as an industry in the usual sense. This makes the issue more complicated.

However, there is a general consensus on the activities that come under copyright industries. It includes printing and publishing of books, newspaper, journals & other periodicals, production and sale of audio products (Cassettes/CDs), production and distribution of cinemas, video and cables, creation of computer software & databases and their distribution radio and television broadcasting, advertising, photography, dramatic and musical performance etc. The list is not exhaustive. But the present study is confined to only the main segments of the copyright industry and covers cinematography works (includes video), sound recordings, literary works (mainly book publishing), computer software and performance.

The economic importance of copyright had been amply illustrated by a number of studies undertaken in the past in various parts of the world, notably in U.S.A., Germany, Australia, U.K., Sweden and some other developed countries. For example, a study conducted in 1993 for the U.S.A. showed that the core copyright industries comprising motion picture, computer software, music and recording and book publishing industries accounted for \$ 238.6 billion in value added to the US economy, which approximately accounted for 3.47 % of the country's Gross Domestic Product (GDP) these industries grew at more than twice the annual growth rate of US economy as a whole between 1991 and 1993 (5.6% as against 2.7% for the economy as a whole). The total copyright industries taken together (i.e. core industries plus those distribute copyrighted products and other products those depend on wholly or principally on copyrighted materials) employed more than 5.7 million workers (about 4.8% of total U.S. workforce) and accounted for approximately 5.69% US GDP in 1993.

In India, no estimates are available to ascertain contribution of copyright base industries to the national economy. However, given the rich cultural background and huge population of the country. It is believed that copyright industries collectively contribute enormously to the economy. India is a largest audio cassette market in the world in the term of number of unit sold. In 1996,

India sold more than 350 million audio cassettes & CDs and the industry's sales turn over stood at Rs.105,605 million. India's software industry is showing a phenomenal growth. During 1996-97, the software industry in India with its size of Rs.63,100 million achieved a remarkable growth rate of above 50% over its previous year's performance. During the same period India could export software worth Rs.39,000 million and the software industry provided employment to more than 160,000 people.

The publishing industry is also quite large in the country. About 11,000 publishers are engaged in producing more than 57,000 new titles every year, of which about 22% is published in English language. In 1995-96 India exported Rs.1120 million worth of books and other printed material. A sizeable portion of this (about 29.1 percentage) went to advanced countries in the Europe. The print media in India comprising daily newspaper and numerous other periodicals e.g. weekly and annual journals/magazines is huge. In 1997, it had a total circulation of 10,57,08,191 and the turnover from print media is estimated to be as high as Rs.8000 crores (table 2.1). The other core copyright industry namely film and video, also occupies an important place in country. Film is considered as one of the best means of entertainment for the common people. India annually produces more than 600 films in major language such as Hindi, Telgu, Tamil, Malayalam & Kannada. The demand for cable & satellite TVs are also on the rise. It is estimated that during 1996 cable connection in the country had reached about 20 million houses covering approximately 10 percent of the total households in the country.

5.2 Copyright and International Relations :

The scope of copyright is not confined merely to the arena of creativity and its economic exploitation in the country of its origin. It has emerged as a major factor in international relations. In the recent past, the trade relations between the US and China deteriorated considerably over the issue of protection of Intellectual Property Right (IPR). The US maintained that the China is the worst violator of

IPRs and the loss to the US economy is more than 2 billion dollar annually because of violation of its IPRs in China's territory. The dispute took a serious turn when US trade groups wanted trade relations with Chins to be stopped completely. It was only after the intervention of the heads of both countries any further deterioration was averted.

The importance of IPRs in general and copyright in particular in the relationships among the countries can be comprehended clearly from the above example. The Sino-US piracy dispute, through a recent one, is not the only case. With the advancement in technologies copyrighted items started flowing freely across the boundaries and piracy assumed an international dimension. Since the nineteenth century the countries felt the necessity of having copyright protections in foreign soil as well. As a result, negotiations were held between countries which in some cases resulted in the conclusion of multilateral treaties.

The first multilateral agreement on copyright is the Berne Convention which was concluded in 1886 and was meant for the providing protection to literary and artistic works. A country joining the Convention has to provide copyright protection to literary and artistic works of member countries in its own territory and also entitled for enjoying reciprocal protection from others. The Berne Convention was received seven times in 1896 (at Paris), 1908 (at Berlin), 1928 (at Rome), 1948 (at Brussels), 1967 (at Stockholm) and 1971 (at Paris) and finally in 1978. Among these, the 1971 revision (the Paris act) is of particular importance to the developing countries as it provided special concessions to these countries in making translations and reproduction of foreign literary works for educational purpose. Ninety countries are at present member of the Berne Convention.

The post Second World War era saw the emergence of the need protection copyright on a universal basis. Till then countries in the North America were not party to the Berne Convention and copyright protection in these countries were

governed by various national and regional agreement. In August, 1952 the Intergovernmental Copyright Convention (UCC). The UCC is not a substitute for the Berne Convention. Rather it tried to establish the link between countries and the countries on the Berne Union and those in North America. India is a member of both the Berne Convention and the UCC.

In recent years, the issue of IPRS figured prominently in the Uruguay Round of General Agreement on Tariffs and Trade (GATT). It is for the first time the GATT went beyond its usual mandate to include the IPRs. The Trade Related Aspects of Intellectual Property Rights (TRIPS) is set out in Annex 1C of the Final Uruguay Round Text. The text comprises 73 articles grouped in seven different parts. The standards for specific IPRs such as copyright and neighboring rights are discussed in part II.

5.3 Copyright in India :

The copyright in India has traveled a long way since it was introduced during the British rule. The first law on copyright was enacted in the year 1847 by the then Governor General of India. When Copyright Act 1911 came into existence in England, it became automatically applicable to India, being India an integral part of British Raj. This act was in force in the country until after independence when a new copyright part act (the Act of 1957) came into effect in 1958. Thereafter the Act has undergone many amendments. The latest in the series is the 1994 Amendment, which came into force in May 1995.

Besides amending the Copyright Act the Indian Government has taken few more steps in strengthening the enforcement in the country. A Copyright Enforcement Advisory Council has been set up for advising the Government on measures for improving the copyright enforcement. Training programmes and seminars are arranged for police personnel. Necessary legislation was made for bringing video shops, cable operators under regulation. State governments are encouraged to set

up IPR cells for exclusively dealing with copyright and other IPR violations. In spite of all these, enforcement of IPR violations, particularly copyright a violation has not been strong enough in the country and piracy prevails exists in all types of copyright works notably musical works, video films and softwares.

5.4 Copyright Piracy :

Copyright piracy is a phenomenon prevalent worldwide. Piracy means unauthorized reproduction, importing or distribution either of the whole or of a substantial part of works protected by copyright. The author of a copyrighted work, being the owner, enjoys certain exclusive rights with respect to his or her works. These include right to reproduce, to publish, to adopt, to translate and to perform in public. The owner can also sell, assign, license or bequeath the copyright to another party if he wishes so. If any person other than the copyright owner or his authorized party undertakes any of the above mentioned activities with respect to a copyrighted product, it amounts to infringements of the copyright. Copyright piracy is thus like any other theft which leads to loss to the owners of the property. Besides economic loss, piracy also adversely affects the creative potential of a society as it denies creative people such as authors and artists their legitimate dues.

There are different ways through which piracy takes place. A computer software is pirated by simply copying it onto another machine not authorized for its use. Book piracy takes place when a book is reproduced by someone other than the real publisher and sold in the market. A performer's right is violated when a live performance of an artist is recorded or telecasted live without his/her permission. In a cinematographic work piracy generally takes place through unauthorized reproduction of the film in video forms and/or displaying the video through cable networks without taking proper authorization from the film producer (the right holder). In fact, there are numerous other ways through which piracy of copyrighted works take place. The nature and extent of piracy also vary across the

segments of the copyright industry. it is, therefore, necessary to discuss the nature and extent of piracy problems segment wise. Such an attempt is made in the following paragraphs.

5.4.1 Literary Work :

Piracy of literary works means illegal reproduction of books and other printed materials and distribution/selling of these for profit. In India, the journals/magazines and other periodicals are not pirated much. Here piracy of literary works generally takes place in three principal base : 1) wholesale reprinting of text and trade books 2) unauthorized translations and 3) commercial photocopying of books/journals. Many a time piracy takes the form of publishing fake books, where authors shown in books are not the real authors.

Book piracy, in India, primarily depends on two factors, namely, the price of the book and its popularity. These two factors positively contribute to piracy. Piracy is generally confined to foreign and good indigenous books. Because these books are demanded in large quantities and are also priced high. The types of books pirated mostly are medical, engineering and other professional books, encyclopedia and popular fictions. The piracy is also wide spread with respect to books published by National Council of Educational Research & Training (NCERT), National Open School and Board(s) of secondary education. These books even if priced low are having large demand.

The pirates first identify books to be pirated and then get the same printed in large numbers through unscrupulous printers. The pirated books are normally sold with other (legitimate) books by usual retailers identified by the pirates. The number of printers/sellers involved in piracy is generally less. The piracy is also seasonal in nature. The entire process of printing through selling gets over within a month or two.

Besides the above, piracy in the form of mass photocopying of books largely prevalent in India, especially in and around educational institutions. Students borrow books from libraries and then get these photocopied from the photocopier kept at the institution where from the books are borrowed. While copyright law permits photocopying of literary works for limited private uses such as research, review or criticism what happens, many a time is that the entire book is photocopied including the cover pages. In the process student community and the photocopy operators gain, but the publisher's loss a huge revenue. Unfortunately, the institutions turn a blind eye to this.

Sometimes even some renowned publishers involve themselves in piracy by way of selling books beyond the contract period. This happens when an Indian publishers buys re-print rights from some foreign publishers and keeps on selling books even after the expiry of the period mentioned in the agreement. This is done in the pretext of clearing old stock. Thus an impression is created that books are printed during the contract period but in reality are sold beyond the contract period just to exhaust the old stock.

The other way through which piracy takes place in printing/selling of books meant for review. The pirates somehow get access to such books and make quick print to sell in Indian market. All these happen much before the authorized Indian distributors get their copies for selling in India. Naturally, the distributor's sales get affected adversely.

Piracy of literary works lead to loss of revenue to publishers (in terms of less sales), authors (non-payment of royalty) and the national exchequer (non-payment of income tax and other levies payable by publishers/authors). While it is believed that book piracy is high in India, it is very difficult to arrive at an estimate. Only information for secondary sources (e.g. publishers, police records etc.) can be gathered to form a rough idea on piracy. But that would reflect only the tip of the iceberg. In terms of percentage, it is believed that

about 20-25 percent of books sold (in number) in the country are pirated. Actual monetary loss due to piracy is anybody's guess.

Anti piracy drive with respect to books is generally weak in India. The industry associations are not very active in this regard. Whatever action is taken is done by the respective publishers. The enforcement machineries (such as police) are also not very active in controlling piracy for a variety of reasons. The public awareness is also very poor.

Besides the above, Indian books are also pirated abroad, especially in the neighboring countries such as Pakistan, Bangladesh etc. India exports books to a large number of countries including developed countries from Europe. During 1995-96 India exported books to the tune of Rs. 1120 million. Exports earnings could have been much more in the absence of wide spread piracy of Indian works abroad. Similarly, foreign literary works are pirated in India. Given the low and rapidly declining value of rupee in terms of hard currencies good foreign books (e.g. US books) cost very high in India. As a result majority of the readers individually can not afford to buy these books. In such circumstances, piracy provides the escape route, because a pirated foreign book in India can be as cheap as half the original price or even less. The International Intellectual Property Alliance (IIPA) estimated that in 1995 trade loss due to piracy of US books in India amounted to \$ 25 million.

5.4.2 Sound Recordings :

The sound recording industry faces three types of piracy. First, there is a simple way by which songs from different legitimate cassettes/CDs (and thus different right holders) are copied and put in a single cassette/CD. These are then packaged to look different from the original products and sold in the market. Second, there is counter- feiting, when songs are copied in to and packaged to look as close to the original as possible using the same level, logos

etc. these products are misleading In the sense that ordinary end users think that they are buying original products. The third form of music piracy is bootlegging, where unauthorized recordings of performance by artists are made and subsequently reproduced and sold in the market. All these happen without the knowledge of the performers, composer or the recording company.

Earlier the music piracy was confined to cassette tapes only. With the advent of CDs in the eighties it was thought that piracy of sound recordings would become things of the past. But in reality CD piracy is the greatest threat to today's music world. Infact, with CDs piracy has got an international vigour. Fortunately, CD industry is still in its nascent stage in India. At present CD market is just 2 to 3 percent of the overall music market in the country. CDs have not taken off mainly because of high prices. In India CDs are sold on an average price ranging between Rs.150 to Rs. 550. considering price of cassettes, the price differential (between cassettes and CDs) is quite high and prohibitive for ordinary music lovers.

Cassettes piracy in India is as old as the cassette industry itself. Govt. policy put music industry in the small scale category and volume of a record company's cassette production was restricted to 300,000 units per annum. This led to a wide gap in the demand supply front which was ultimately bridged by the pirates. Even if music piracy percentage has declined from a high of 95% in 1985 to about 30 % in 1995, India is the world's sixth largest pirate market in value terms (table 2.2) but third in value terms (table 2.3). In 1995, more than 128 million pirate cassettes/CDs were sold as against the sale of 325 millions of legitimate audio products. The sale pirate cassettes/CDs (both in number & value) is also on the rise in the country. However in contrast to many development countries piracy of CDs is low in India. At present CD piracy is below 10% level.

The popularity of Indian music has gone beyond the National boundaries. There is large demand for Indian music in the neighboring countries such as Pakistan, West Asia as well as far off countries like USA, Canada and the UK. Indian music is also pirated in some of these foreign countries, the notable among these being Pakistan and West Asia. Similarly, foreign audio products are also subject to piracy in India soil. As per IIPA's estimate the trade losses due piracy of American audio subjects alone in India was to the tune of US \$ 10 million in 1995.

5.4.3 Cinematographic Works :

Copyright in cinematographic works is more complex in nature as there exists a variety of copyrights in a single work and many a times these rights are also overlapping. The first right in a film is the 'theatrical right' i.e. the right to exhibits films in theatres. The producer is the copyright holder. The distributors buy theatrical rights from producers and then make some arrangements with the theatre owners for actual exhibition to the public. The theatrical rights are limited by territory and time. Films are also released in video cassettes in fact, these day viewing film at home has become more popular than seeing the same at theatres. The producers sell the video rights to another party, who makes video cassettes for sale in market. These cassettes are meant for 'home viewing' only i.e. one can buy a copy of it for seeing at home with family members and friends. Such cassettes can not be used for showing the film in cables or through satellite channels. Because showing films in cables or satellite requires acquisition of separate sets of rights namely 'cable rights', and 'satellite rights'.

A cable network generally limited to local areas as it requires receivers (viewer's TVs) which are to be physically connected through cable wire to the operators. In case of satellite channels, however, there is no such physical limit as transmission takes place through air and received at the users end by dish

antenna(s). Interestingly in India satellite transmissions, in most of cases, reach to endusers through cable networks only.

The cable networks in India work in a two-tier system. At the top there are main operators who transmit their programmes through numerous small local operators on a franchise basis. As mentioned earlier programmes of satellite channels reach the viewers through cable networks. The (main) cable operators do not pay anything to satellite channels for viewing channels for showing latter's programmes in the network, except for pay channels (e.g. ESPN, Zee Cinema, Movie Club etc). The small cable operators, however, share their incomes with their respective main operators. The revenue for small operators comes from the subscription of viewers.

Music is an integral part of any cinematographic work. In India, film account for almost 80% of the total music market. Even if film producer has the copyright in the film, the music included in the film is the outcome of efforts undertaken by a separate group of creative people such as the composer, lyricists etc. Each of which is right holder of its own right. Generally the producer sells the rights of a music company who makes cassettes/CDs of such songs for sale in the market. The incidence of a large number of rights in a single work and the involvement of a variety of right holders make the copyright issue very complicated in cinematographic works.

Piracy of cinematographic works takes two principal forms, namely 'video piracy and 'cable piracy'. However, piracy in one form can spill over and affects the revenues of the other. Video piracy takes place when a film is produced in the form of video cassettes without taking proper authorization from the right holder i.e. producer. Many times producers of films sell video rights to another party (generally after six weeks or more of release in theatres) who makes video cassettes for selling or lending. The video cassettes kept for sale are meant for home viewing only. Any commercial use of such cassettes

like in video parlour or in cable networks amounts to copyright violation. Two types of video piracies are common in India. One, where video right for films has not been sold at all (by the products) but video cassettes are available in the market for market for buying or borrowing. And two, when video right is (legally) sold to a party, but cassettes are made and sold by others (pirates) as well.

Cable piracy is unauthorized transmission of films through cable network. As mentioned above, showing a film in a cable network requires acquisition of proper authorized from the right holder. But many a time films, especially the new release, are shown through cables without such authorization, which tantamount to piracy.

Piracy is real phenomenon in satellite channels because such channels are organized and generally do not show films without buying proper rights. But there are cases where right of one channel operator is violated by others.

It is very difficult to give a rough estimate of video piracy in India because information in this regard is scanty and accessible. But video piracy in both the forms are quite rampant here. Besides this, piracy through video parlours is largely prevalent normally in the rural India or smaller towns. Perhaps more widespread and damaging is the cable piracy. These days almost all new releases are shown in the cable simultaneously with the exhibitions in theatres. As per a resolution adopted by the film Makers Combine, video release of a film can be made only after six weeks of theatrical release, but cable operators show such films much before the stipulated time period. This is a clear case of cable piracy and its extent is considerably high in country.

All parties involved in the legitimate transaction of film from the producers to the theater owner, lose, heavily because of widespread video or cable piracy. The Government also loses because pirates' activities do not bring

in any revenue such as entertainment tax at theatres and excise duty and sales tax at the point of legitimate production/selling.

5.4.4 Computer Software :

The piracy in computer software simply means copying and distribution of computer programmes without the copyright holder's permission. The software industry, generally, consists of creation and distribution of computer programmes. Creation of computer programme is similar to writing a novel or other literary works and it requires intellectual skill and training in software programming. Though a software can be written by individual programmer, most of the major software's are the outcome of group efforts, where medium to large sized teams spend months or even years to write a complete programme.

Distribution of computer in most of the developed countries occurs through a two tiered system of wholesalers and dealers, similar to that of many other industries. The software publishers make a substantial amount of their shipments to a small number of distributors in any given country. Who maintain well stocked warehouse and can respond quickly to orders from hundreds or thousands of individual retail dealers or resellers. The dealers market and provide the software products directly to end users of computers. The end user can be individuals, commercial enterprise, educational institutions and number of the largest dealers or resellers in an individual country. Licensing is a common practice in software industries. The publisher of software generally authorises its end users through the mechanism of the shrink wrap license contained in the package.

Like other copyright based industries, the software industry also faces several of piracy. In fact, piracy software is more than in others because it is relatively easy to copy a software in computers especially in PCs and for all

practical purpose the pirated version looks and performs in an identical manner as the original. The five principal types of software piracy involves –

1. counterfeiters
2. resellers
3. mail order houses
4. bulletin boards and
5. end-user piracy.

Counterfeiters are relatively new phenomenon in the software industry and most flagrant software counterfeiters produce disks, documentation and packaging that look very similar to those of the software publisher. Reseller piracy occurs in the software distribution channel, when distributors or dealers either make copies of software onto floppy disks, or the internal storage device or the “hard disk” of computers that they are selling, without authorization from the software publishers. Mail-order piracy consists of the unauthorized copying of software onto diskettes, CDs, or other media and distribution of software by post. Bulletin board pirates engage in unauthorized reproduction and distribution of software via telecommunication. Typically, this involves an individual computer user who has installed a number of software programmes on his computer, and who allows other users to connect to his computer through the telephone line via modem and copy the programmes onto discs. The pirate in most cases has copied the programme onto his own computer without authorization of the copyright holder’s consent is also a copyright violation. End-user piracy takes place when user copying software onto hard disc on more computers than the number authorized by the publisher. This form of piracy perhaps takes place on a wider scale than other distribute or exchange the same. Though this harms the internets of right holders, endusers definitely gain out of his because this leads to obvious economic advantages for them.

Identifying a pirated software is not an easy task. This is primarily for two reasons. First, as mentioned earlier there is hardly any difference between an original software and a pirated software, once it is copied onto a hardware. Second, detection of piracy requires access to software or hardware or both, which may not be feasible in many cases. However, there are some ways through which an unauthorized copy of a software can be identified. Many a times publishers supply software in packaged form which contain software on diskettes with printed labels giving manufacture's name, full product name, version number, trade mark and copyright notices. Besides these, the packages also typically, contain professionally printed documentation, a keyboard template, enduser license and registration cards and other printed materials pursuant to a standard bill of materials that would apply to all packages of that particular product. In such cases, the most simple pirated copies may be spotted easily on "black-disks", which do not contain manufactures, label but rather type written, hand-written or crudely printed labels indicating the programmes contained on the diskettes. In case of installed software it is more difficult to identify a pirated copy. Once a computer is searched, the programme copied onto it can be found and identified. Then users can be asked to produce the proof of original possession (e.g. original package, documentation, purchase record license cards etc.) of such programmes. If users fail to do so, there is a prima facie case of infringement. In some cases even test purchases can be made to secure evidence of piracy.

The extent of piracy and losses due to such piracy can not be given in exact quantities terms though it is believed that piracy in this sector is widespread. In Europe alone the software industries lose an estimated \$ 6 billion a year. In fact, Europe holds the dubious distinction of accounting for about 50 percent of worldwide losses from software piracy, more than any other region including the number two Asia. According to a study of Software Publishers Association, a US based body, losses due to piracy of personnel computer business application software's nearly equaled revenues earned by

the global software industry. In 1996, piracy cost the software industry US \$ 11.2 billion, a 16 percent decrease over the estimated losses of US \$ 13.3 billion in 1995. The country-specific data show that in 1996 Vietnam and Indonesia had the highest piracy rate of 99 percent and 97 percent respectively, followed by China (96%), Russia (91%), Thailand (80%) etc. in India software piracy is costing the IT industry quite dear. According to a survey conducted jointly by business software Alliance (BSA) and NASSCOM in May 1996, total losses due to software piracy in India stood at a staggering figure of about Rs. 500 crores (US \$ 151.3 million) showing about 60 percent piracy rate in India.

Even police personnel, who can play a major role in combating piracy, are not fully aware of various provisions of the law. There is also lack of adequate number of personnel who can fully devote to copyright crimes alone. The police is more concerned with usual law and order problems and copyright related crimes are attached least priority.

The awareness level among end users is also very low. While buying a copyright products, majority of consumers do not look at copyright notification (e.g C or P). as long as price low (as generally is the case with pirated products) users do not mind buying pirated products even knowingly.

Table 1 : Turnover from Print Media in India (1997)

Periodicals	Circulation (‘000)	Publication Frequency	Av. Price* (Rs.)	Value (Rs. ‘000)
Daily news paper	45914	365	02	33517220
Tri/Bi-weekly	538	104	05	279760
Weekly	35475	52	15	27670500
Fortnightly	8502	26	30	6631560

Monthly	13442	12	75	12097800
Quarterly	637	04	100	254800
Half yearly	450	02	150	135000
Annual	750	01	200	150000
Total				80736640

* Arrived at based on discussions with some producers/sellers of periodicals

Source : Computed using circulation figures from the Press in India, 1998 published by the Ministry of Information and Broadcasting, Govt. of India.

Table 2 : Top Ten Pirate Territories (Value)

Country	Pirates sales in US \$ (million)	Pirate % of Total sales	% of World pirates sales
Russia	363.1	62%	17%
USA	279.4	2%	13%
China	168.0	48%	8%
Italy	145.6	20%	7%
Brazil	118.8	1%	6%
Germany	92.2	3%	4%
Mexico	85.3	22%	4%
India	82.1	23%	4%
Pakistan	62.1	94%	3%
France	58.1	2%	3%
Total	1,455.0		68%

Source : Information Federation of Phonographic Industry (IFPI). London

Table : 3 Top Ten Pirate Territories (Units)

Country	Fines/Penalty	Imprisonment Terms
U.S.A	Upto \$ 250,000 for a first offence of infringement by a individual done in "Willfully and for purposes of commercial advantage or private financial gain"	Upto 5 years.
	Upto \$ 250,000 for a second offence by an individual.	Upto 10 years.
	Upto \$ 50,000 for first offence by an organization.	Upto 5 years.
	Upto \$ 500,000 for a second offence by an organization.	Upto 10 years.
France	6,000 to 120,000 France (about US \$ 1070 to US \$ 21,428) for a first offence of infringement. Double the above penalties for second offence.	3 months to 2 years.
Poland	Unspecified fines for unauthorized dissemination for purpose of economic gain.	Upto 2 years in jail.
	Unspecified fines if the infringer turns the above offence into a regular source of income for a criminal commercial activity and organizes or direct such activity.	Not less than 6 months and not more than 5 years.
	Unspecified fines for unauthorized fixation or reproduction activity.	Upto 2 years in jail.
	Reported the maximum criminal fine under the penal code is 250 million zloty (about \$ 11,075).	Upto 3 years in jail.
Hungary	Unspecified fine for infringements causing considerable damage.	Upto 3 years.
	Unspecified fine for infringements causing particular high pecuniary damage.	Upto 5 years.
Greece	1 to 5 million Drachmas (about \$ 4,050 to \$ 20,485) for infringing acts.	At least 1 year.

	2 to 10 million Drachmas (about \$ 8,100 to \$ 40,485) apply if the intended profit or damage threatened by infringing acts are particularly large.	At least 2 year.
Portugal	The equivalent of between 150 and 250 days for infringements of enumerated acts. The above penalty doubles for repeated offence, provided that the offence in question does not constitute an offence punishable by a more severe penalty.	Upto 3 years.
Singapore	Upto \$ 10,000 for the article or \$ 100,000 or which is lower.	Upto 5 years.
	Upto \$ 6,666 or \$ 66,000 for violation of the reproduction and the display rights and to the sale or importation of infringing copies.	Upto 3 years.
	Upto \$ 50,000 (US \$ 33,335) for violation of the distribution rights.	Upto 3 years.
	Upto \$ 20,000 (US \$ 33,335) for making or possession of a 'plate or similar contrivance for the purpose of making infringing copies of sound recording or audio – visual works and for violation of the public performance right.	Upto 2 years.

6 Web Law : Web creators should know these FAQ :

1. May I freely copy, print, and e-mail things I find on the Web?
2. May I scan any image I wish and post it on my web site?
3. May I use images from the web sites of others?
4. May I freely link to the web sites of others?

5. Someone has set up a link to my web sites without any permission – what can I do?
6. How may I keep people from taking things from my web sites?
7. Do MIDI and WAV files violate copyright laws?
8. Can other people copy my e-mail or news postings?

6.1 May I freely copy, print, and e-mail things I find on the Web?

The internet is the sort of place where it is extraordinarily easy to copy things, although it must not be forgotten that ease of copying did not start with the Internet. The cassette recorder made it easy to copy record albums. The photocopier made it easy to copy printed works. The videocassette recorder made it easy to copy movies. Floppy disks made it easy to copy computer software. In any of this media, the fact that some thing is physically easy to copy something does not mean that it is legal to copy it, or morally acceptable to copy it. Absence of a copyright notice does not mean that it is okay to copy something. Under US copyright law, for example, any original work fixed in a tangible medium is automatically protected by copyright regardless of whether any copyright formalities are done. Under the Berne Convention the absence of a copyright notice does not mean that a work is not protected by copyright. Clearly one way to solve the problem is the simple step obtaining the permission of the copyright owner. Yet another way is to confine one's copying to items that are in the public domain, for example because they were created hundreds of years ago. Obtaining permission is a more difficult task that one might think. Suppose you see a web site that contains something you wish to copy, and suppose you obtain permission from the webmaster of that site to copy it. Does this mean you may post it on your web site without fear of liability? The answer is no, unless it happens that the webmaster is in fact the owner of all rights in the work you wish to copy. Can you be sure the work was not copied (in an authorized manner) from some place else? If not, then permission from the webmaster does not put you in the clear. The legal system does, however, permit some kinds of copying if it is

done without the permission of the copyright owner. Under US law, for example, even if the copyright owner has not given permission, it is still okay to copy something so long as the copying falls within what is called "fair use". Regrettably for those who are eager to copy things, it is not easy to say for sure what is or not fair use. Legal factors that are taken into account include : the portion of work being copied (copying a small portion is more likely to be fair use than copying a large portion; the effect of the copying on the market for the item being copied (if the copying activity makes people less likely to buy the item, then the copying is unlikely to be fair use; and the use to which the copied matter is put (quoting for use in literary criticism or for educational purpose is more likely to be fair use than some other uses). If you see something on the web and are tempted to copy it, why not just put in a link to it? For example, Internic has a policy according to which domain names are registered, and the evolve in this areas. Perhaps after some years of experience with the web, courts will decide some cases that will provide guidance as to what is not. No discussion of copyright and the web would be complete without at least a mention of the notion of "implied license". For example, when I use my web browser to view a site, I am necessarily copying information from that site to the screen of my computer. Many web browsers have "cache" capabilities, in which case I am also necessarily copying the information into the cache as well. Most browsers have the capability to print what is on the screen, so if I print it I am automatically making a copy of it on paper. As years go on the courts will develop the notion of implied license in connection with the web, but it is clear that there is some sort of implied license that is automatically granted anyone who sets up a web site and makes it open to the public. The implied license surely includes those things we think of as "normal" web activity - viewing web pages, clicking on links, seeing the web text on the computer screen. What must not be forgotten, though, is that such an implied license is by no means a grant that permits members of the public to do whatever they may please with the material found on a web site. To draw analogies, the person who publishes a book is not granting to the public the right (via implied license) to photocopy the entry of the book and to sell the copies.

The musician who release a compact disk is not granting an implied license to set up a facility for copying the CD's and selling the copies. Common sense suggests that if a webmaster has placed a copyright notice so that it is seen by visitors to be a web site, then the webmaster probably is trying to communicate to the public that the contents of the site are not to be freely copied in all ways. Of course, as mentioned above, the absence of a copyright notice does not mean a site is not protected by copyright. as well be appreciated from the above discussion it is impossible, of course, to answer the "may I copy this?" question in general. If you care about copying some particular item you should consult component counsel for advice.

6.2 May I scan any image I wish and post it on my web site?

The simple answer is "no". While it is physically and technically easy to scan images out of books and magazines, and to place computer readable (GIF and JPG) copies in one's web site, the fact that is physically and technically easy does not make it legal or moral. See the discussion above regarding copying works of others into one's web site. The safest course of action is to obtain permission from the copying from the copyright owner before posting a scanned image into your web site? Suppose you take a photograph yourself can you freely scan it and put it on your web site? Even this sort of photograph can cause trouble. If it is a photograph of someone else, it is safest if you obtain a "model release" from the person releasing you from liability for use of the photograph. From the above discussion it should be clear that if you really care about this you should seek advice of component counsel.

6.3 May I use images from the web sites of others?

Before the web came along, the only way a publisher could make use of images from others was by physically copying the images into the work being published. The above discussions regarding the copying of the text or images

address such copying. But the web allows a new and quite interesting way of using the images of others, namely the "IMG" hypertext reference. It is physically and technically easy to include an IMG references in your web site, giving a URL (address) located on somebody else's web site. The use of an IMG reference to somebody else's web site is intriguing. Suppose your web site is on a machine in which you are charged "per megabyte" for it's by visitors. Then when a visitor to your web site views one of your pages, and if the image on your page is an IMG reference pointing to somebody else's web site, the visitor's browser will obtain the image from the web site. It won't run up your bill. Or suppose your web site is on a machine that has only a slow (narrow bandwidth) link to the Internet. Then if a visitor to your web site views a page of yours that contains an IMG reference to some other web site, the visitor's retrieval of the image won't slow down your link. It will slow down the link of that other web site instead. There are practical reasons why you might not wish to use IMG links to images on the web site of others. the image might be changed without your knowing it, leading to an unpredictable result for visitors to your web site. The image might be deleted from its web site, leaving a gaping hole in your web page.

6.4 May I freely link to the web sites of others?

URL copyrightable? Is "no". But the world is filled with legal constraints on behaviour in addition to those that come from the copyright laws. Having discerned that the question "is a URL copyrightable?" is irrelevant, how can we arrive at an answer to the original question ? an important step is to figure out what kind of link we are talking about. The previous section discusses a somewhat esoteric kind of link, the so called IMG link to someone's website without getting permission first. But the fact is that if you were to study several hundreds web sites, you would find that the links from one web site to another are virtually all so-called HREF links, and that virtually none of them are IMG links. An HREF link is the kind we are all accustomed to. It is a region on the screen which, when selected by the visitor, causes the present screen to be erased and

causes a entirely new screen to be loaded. the words "previous section" in the previous paragraph are an HREF link – they cause the screen to be loaded a new with the text of the previous section. So now for clarity let us redefine the question as "may I freely set up HREF links in my web site, to the web sites of others?" as will be clear in a moment, the short answer to that question is "yes". (Except in the case of framing). In general, of course, it is desirable for one's site to be the subject of links from other sites. Most people who create web sites hope that lots of people will visit, and links from other site promote this goal.

6.5 Someone has set up a link to my web site without my permission – what can I do?

The first question would be, why do you care? Does the link cast you or your site or your organization in a bad light? Does it lead to a situation where someone else is taking credit for your work. For these or other reasons, as discussed in the previous section, you may have a legitimate gripe. Before you spent money on lawyers, though, it is suggested that you try resolving the problem by direct communication. Send an email or a paper letter explaining what you want done. Then if you must, consider retaining counsel, preferably counsel who are familiar with the internet as well as with intellectual property. If the link is an IMG (image) reference, consider changing the URL of your image, and put some nuisance image in the place of the original URL for the image. That should discourage people from using your image without your permission. But generally unless there is some special reason to the contrary, you should be pleased if someone else up a regular (non-framed HREF) link to your web site.

There are a number of steps which the operator of a web site may take to attempt to minimize the extent to which others take things from it. The simplest is not to post on the web site. Another is to use the access controls built into the web server to limit the range of IP addresses that are permitted to enter the site. Still another is to set up password protection, so that only certain persons are permitted access to your site.

6.6 How may I keep people from taking things from my Web site?

As well be appreciated, however, such suggestions would be of no help to most web site operators. Most web site operators want their web sites to be available and open to the world at large. Thus we can recommend some other steps that may dissuade others from taking things from you. These steps includes : filing copyright registrations, placing copyright notice and related notices on your web site, obtaining trademark registrations, placing trademark notices on your web site, and seeking patent protection for whatever there may be in your web site that is patentable.

6.7 Do MIDI and WAV files violate the copyright laws?

MIDI and WAV files are files which, when played back through appropriate software and hardware, reproduce sounds, music, or voices. It is more and more common place for the designer of a web page to include not only image (IMG) files to provide images, but also to include MIDI or WAV files to provide audio accompaniment for the page. A WAV file can reproduce any audio information (e.g. Homer Simpson saying "Doh", or the entirety of a popular song as heard on the radio), while MIDI files only reproduce that which can be played on a keyboard. This discussion focuses on the law in the United States, and while many other countries have similar laws, there are differences from country to country & can other people copy my e-mail or news postings? Any original work which you fix in a tangible medium is protected by copyright. The copyright laws of most countries reserve to the copyright owner the exclusive right to make copies of such a work or to distribute it. Upon hearing this, the reader might wonder how usenet news groups (which involve copying one's writings to thousands of news servers around the world) could possibly be legal. The answer is that when one posts to a usenet group, one is giving permission to those who operate news servers to propagate the posting in the way that news server propagate postings. Similarly if one sends emails to an email discussion group,

one is giving permission to the computer that remails the items to reemail the items. And of course one who posts material on a web site is impliedly giving visitors permission to view the site on their web browsers. It would be a mistake, however, for someone to think that because it is easy to copy things from the internet, it is always legal to do so. Similarly it would be a mistake to assume that because a person who posted news or opened a web site granted permission to the public to do certain things that the permission extends to all kinds of copying. The writer has heard of CD-ROMs being offered for sales that contain the entirety of the news postings in particular usenet groups, and it is difficult to see how this could be legal in the absence of permission from those who published the articles.

CHAPTER: FIVE

ROLE OF COPYRIGHT SOCIETIES AND PUBLISHING INDUSTRY

INTRODUCTION

The pace of change has been so rapid in recent years in technology, in the effects of change have been so far reaching. An important feature of the Copyright Act is to regulate the activities of the performing rights societies functioning for the public performance of the copyright works in their repertoire. The enormous advances made by technology in the proliferation of the mechanical means of reproducing and broadcasting music and sound recordings created a situation where it became difficult to protect the rights of writers and composers as well as of those who reproduce recorded music. In consequence, performing rights societies were set up to act as intermediaries or agents to collect appropriate fees in respect of such performances and pay an adequate sum to the copyright owner. In the earlier Copyright Act of 1924 there was no provision for judicial scrutiny of the tariffs charged by these societies who functioned in an arbitrary manner. But the Copyright Act, 1957 has laid down certain obligations on them in order to regulate their activities.

Section 63 is a penal section that spells out punishment of imprisonment for a term not less than 6 months but which may extend upto 3 years with fine which shall be than 50,000 rupees but which may also extend to two lakh rupees, Section 63 also provides for enhanced punishment for second and every subsequent offence. Section 64 empowers a police officer, not below the rank of sub inspector to seize without warrant all copies of the work and the plates used for the purpose of making infringement copies and produce them before the magistrate.

1. Need for Copyright Societies :

It is very difficult for an individual writer, composer or musician or other person to sell his original work in the country or abroad without any risk of shutting out the potential licensees or buyers or misuse by such persons and getting the appropriate commercial benefit. It is also not practice for an individual to sell his work

and fixing the royalty and collecting of the fees and to keep track of the copies or frequency of display not a technical and commercial person to evaluate the potential of the work. The selling of the products, getting the agreements signed negotiations for royalty and collection of royalty fees are considered to a business. The business is suppressed to be done through technical experts in the field of business. It is also not possible for an individual to check any infringement of his original work and getting the matter legally objected in the right forum. It was in this background the need of an agency, who can look after the whole community of right holders in a particular field to combinedly form a society to take a common interest and cause for their benefit.

2. Reasons for violation of copyright :

The very essence of copy right is the protection of works from duplication, where as the term use mean not only reading and copying but also photocopying and downloading etc. following are some common reasons for violation of copyright by most of the user :

- I) Shrinking budgets/scarcity of fund in the L & IC.
- II) Non-availability of books due to out of print.
- III) Delay in supply/procurement of books/journals.
- IV) High cost of books/journals.
- V) Urgent need of a portion or chapter from a book and no time to take permission from the copyright holder.
- VI) Ignorance of Intellectual property rights.
- VII) Due to language barriers the user sometimes goes for translation of a book without prior permission.
- VIII) Unauthorized downloading of software programmes, database and copying of audio/video cassettes containing educational and recreational materials.

3. Piracy menace in Music in Asia :

Problem of piracy has arisen with the rapid advance of technology. New techniques of printing, recording and fixation of broadcast or recorded programmes have made easy the pirate's job. While film makers have no stone unturned to ensure that film they produce does not find its way into the drawing rooms in India. Country the big bad boys of the industry, video pirates and cable operators, music makers are at their wit's end. Mira Nair, the producer of the much linked film "*Monsoon Wedding*" hired layers and security agency to physically track each of the 86 prints of the movie and also secured indemnities against the leakage of prints at any point so that the security agencies and cinema house owners would reply the costs in case of a leakage. "*Lagaan*" print was leaked in transit. Pirated "Asoka DVD and video cassettes" of the film have been seized in Manhattan, NY in America. It's said estimated that the makers of 'Asoka' have lost hundreds of thousands of dollars in theater collections due to piracy since the film was released.

Globally counter feiting and piracy have risen to 5-7 % of total world trade or above 200-300 billion dollars lost in revenue. According to recent estimates from the European Union most of fakes originate in Asia, where absolutely everything is counterfeited. At the top end, piracy is carried out by organized syndicates with powerful patrons in government and armed forces according to the International Federation of the photographic industry one in every three recordings sold world wide is pirated. The IFPI has been created to protect the interests of music industry world wide. It has consultative status with World Intellectual Property Organization (WIPO), UNESCO and the ILO. When the Hongkong Customs and Excise department first began its crackdown on fake music and movie CD's in 1992, the Criminal gangs moved their factories to Malaysia. An illegal optical disk plant pay more than \$ 1 million in profits every month – says an investigator "It's like wining a lottery ticket week after week". It coast around \$ 5 million to buy machines from Germany to Taiwan that churn out more than 1 million CD's a month of music, movies, software, videogames or whatever is in demand. The pirates cover their initial outlay within

three four months. After that it's cream. Each CD costs about 15 Cents and it sells for around \$ 5. However under the US copyright Act, It will be interesting to note that there is no statutory provision for an action for contributory infringement of a copyright by providing an actual infringer with the necessary equipment or materials to make a copy of a copyright work, there the court have recognized the existence of such a right. Any avid newspaper reader will recall the US Federal courts decision in the Sony Corporation of America Universal city studios involving the Napster Inc. Napster provides a service through which the computer users can, through the Internet, download music recordings that were resident of computers of any other person which logged on to Napster's site at the time.

4. Piracy in Music : Picture in India :

Police in India carryout raids detect piracy. Cassette sales pirate recordings in 1998 were estimated at 177 million units making India the world's largest pirate market in volume and sixth in value. Pirate sales in India account for nearly 30 % of total unit sales.

Piracy has been defined by WIPO in its draft model provision on counterfeiting and piracy as, the manufacturing of copies of protected work's performances, phonograms or broadcasts provided that such copies are manufactured on commercial basis.

From the operational angle, piracy falls into three specific categories :

- I) Pirates Recordings.
- II) Counterfeits and
- III) Bootleg.

I) Pirate Recording :

These are unauthorized duplications of music from legitimate recordings for commercial gain. Pirated CDs or music cassettes sells as "Top Ten" /

“Bollywood Hits” or a combination of hit titles of different music companies. The packing and presentation of a pirate copy does not usually resemble a legitimate commercial release.

Table No. I Showing raids carried out in India :

Particulars	Years			
	1998	1999	2000	Till June 2001
No. of Raids	759	947	1054	541
Cassettes	1,213,426	5,94,486	7,69,711	2,65,597
Seized CDs Seized	40,200	33,357	75,225	53,096
CCPs cards seized	376	292	348	174
Inlay cards seized	3,726,437	3,253,803	3,357,879	437,459
Computer CD writer seized	2	15	30	28/13
Arrests	855	1096	1175	584

II) Counter Feiting :

Pertains to unauthorized copying of the sound, artwork trademark, label and packaging of the original recording. The aim is to mislead the consumer into thinking. They are buying the genuine product.

III) Boot Legging :

This is the recording, duplication and sale of a performance such as live concert or broadcast without the permission of the artist or the Record Company which may be entitled to control the recording rights of the artists performances.

Thus, while pirates have nearly killed the music industry in countries likes Asia, Bangladesh, Sri Lanka etc. The association of producers of sound recordings formed the Indian phonographic industry in 1936, which is now called as the Indian

music industry IMI. It is the premier organization working to uphold the interests of creative phonogram producers and give a sense of solidarity, purpose of an direction to various companies engaged in producing recorded music. It has members such as HMV, Universal Music, Tips, Venus, Magna sound, BMG Cresscendo, Sony music etc. companies.

5. How to recognize Pirated version :

<u>Counterfeit Cassettes</u>	<u>Pirated Cassettes</u>
<ol style="list-style-type: none"> 1. Inlay cards will different in quality and color of printing. 2. Cassettes will not have the name of company on the leader tape. 3. Company name will be missing on cassettes. 	<ol style="list-style-type: none"> 1. Inlay card may show poor quality print. 2. The cassettes may carry a vague or unknown brand name. 3. Will bear combination of title there belonging to different companies. 4. Requirements of Sec. 52 A such as name and address of the persons who have made the sound recording & year of publication will usually be missing. 5. A compilation of the songs from different albums under names such as Top ten, Bollywood hits etc.
	<p>Pirated CD's</p> <ol style="list-style-type: none"> 1. Sources identification code missing. 2. Print on the inlay cards may be fussy and be poor quality.

6. Hitherto performing Rights Societies – Now Copyright Societies :

Prior to the amendment Act of 1994 the provisions under sections 33 to 36 for setting up of performing rights societies were concerned with forming societies which could only issue or grant licenses for performances in India of any work in which copyright subsisted. These societies had a limited field of operation viz. granting licenses for the purposes of literary dramatic or music – work, which is of such a nature that it can be performed in public i.e. a stage play based on a novel etc.

The copyright Amendment Act 1994 has replaced SS 33 to 36 and has extended the operation of the legal provisions to all classes of work, in which copyright may subsist under the Act. Section 33 of the Act provides are allowed to carry on the business of issuing or granting license in respect of any work in which copyright subsists. The Central Govt. has been empowered to register copyright societies in subsection (3). It shall have regard to :-

- I) The interests of the authors and other owners or rights under this Act.
- II) The interest and convenience of the public and
- III) In particular of persons, who are most likely to seek license (prospective licenses) in respect of the relevant rights).
- IV) The ability and professional competence of the applicants (association), if satisfied as to above the Central Govt. may register such associations of persons as copyright society, subject to such conditions as may be prescribed.

The present chapter on “Copyright Societies” (Chapter VII : SS 33 – 364) has been inserted by 1994 amendment w.e.f. 10 May 1995. it provides for the registration of copyright societies by the Central Govt. from the above date no person or association of persons shall commence or carry on the business of issuing or granting license in respect of any work in which copyright subsists or in respect of any other rights conferred by this Act except under or in association with the registration granted under sub-section (3) by the Central Government.

Thus the copyright societies may not only deal in copyright but they may also be established for performers rights and broadcast reproduction rights. Any association of persons who fulfill such conditions as may be prescribed may apply to the registrar of copyrights for permission to do such business. The Registrar is required to submit the above application for permission to the Central Govt. Central Govt. may register such association of persons as a copyright society subject to such conditions as may be prescribed one society for one class of work.

Ordinary not more than one copyright society shall be registered by the Central Government to do business in respect of the same class of works. Existing performance right societies are to be deemed to be themselves registered within one year from the commencement of Amending Act of 1994.

The act has given the overriding power to the Central Govt. that if a copyright Society is managed contrary or detrimental to the interest of the owners of the rights concerned it may, after satisfying itself through an enquiry in the prescribed manner, cancel the registration of such society. The Central Govt. has also got authority in the interest of the owners of rights to suspend the registration of such a society, pending enquiry for a period not exceeding one year. The Govt. in such a case shall appoint an administrator to discharge the functions of the copyright society under sub-clause (5) of section 33 .

7. Power and procedure of Copyright Society :

Section 34 of the Act enacts various rights, powers and procedures of copyright society as under copyright society may accept from an owner of rights exclusive authorization to administer any right in any work :

1. by issue of license or
2. collection of license fees or both.

The owner of rights shall have the right to withdraw such authorization without prejudice to the rights of the copyright society, under any contract.

It should be alright for a copyright society to enter into an agreement with any foreign society or organization administering the rights, corresponding to all rights under this act. The agreement with such a foreign society may include administration to those rights which are being administered by the concerned copyright society in India in the foreign country and administration in India on behalf of the foreign society the right being administered by such foreign society in relation to foreign works.

However, no such society shall permit any discrimination in regard to the terms of the license, disbursement of fees collected between Indian and other works. Copyright is entitled to issue license or collect fees in pursuance of such licenses and distribute such fees among the owners of the right, after making deductions for its own expenses. There is a residuary power wherein the society may perform any function which is not inconsistent with the basic norm that copyright society has to sub-serve the interest of owners of rights.

Copyright society shall be subject to the collective control of the owners of the rights under the Act, whose right is administers. The society shall submit to the registrar of the copy right such returns as may be prescribed by the Central Govt.

Also there is another body 'SCRIPT' i.e. "Society for Copyright Regulation of India producers for Films and Television" that is registered by the Registrar of Societies, Greater Bombay, Mumbai during 1998 to protect the copyrights of Cinematography films and TV films and to prevent piracy of films.

8. Why Piracy in Music Industry should not be tolerated? :

Piracy costs the music industry and the Government crores of rupees every year. It is estimated that out of nearly 4 - 9 crore cassettes sold each months, 1.6 crore

are illegally manufactured and sold by pirates. Though not the creators of the intellectual property the pirates evade payment of royalty, excise duty, sales tax and the promotion and publicity costs consumers pay for a poor quality product. Artists and other right holders are robbed of their royalties. Music companies are deprived of their rightful revenue. Govt. is deprived of its revenue through evasion of taxes, piracy results in loss to the exchanger of nearly Rs. 19 crore in Sales Tax, Excise and Income Tax. It is only the pirates who stand to gain.

9. Government's Commitments :

The ministry of Human Resource Development is responsible for copyright administration and it has set up a "Copyright Enforcement Advisory Council to control infringement on copyrights. The copyright Enforcement Advisory Council has advised setting up of special policy cells in the states to deal with copyright complaints.

The Berne convention was establishment in 1886 in Berne to protect international copyright through mutual co-operation. It is administrated (WIPO). The Universal Copyright Convention (UCC) was adopted in 1952 and is administrated by UNESCO India is also a party to the Geneva Convention 1971 for protection of producer of phonograms against unauthorized duplication of their phonograms.

10. Legal relationships between Libraries and Publisher :

Probably the most important area of law pertaining to the relationship between libraries and publisher is copyright law. International convention and National legislation relation to copyright and the so called "neighboring" rights provide the legal framework for the use of the Intellectual property that is central to the publishing industry's commercial viability. In protecting the copyright owners exclusive right to authorize a wide range of uses of an original work, copyright law ensures the owner's right to control the commercial exploitation of the work for the duration of its term of

protection. However, those same International conventions and National laws also recognize the need to protect the "Public Interest" through limitations and exceptions to copyright that permit certain uses that are carried out for purpose of research, education and private study. Libraries and their private study have a large stake uses obviously have a large stake in those exceptions.

In Canada we have recently been through the process of amending our copyright legislation to address a number of outstanding issues, among which was the matter of exceptions for libraries, archives and museums. In the debate over the proposed legislation, those representing authors, musicians, publishers and the copyright collectives in the bill were too broad in scope. Some went so far as to suggest that the very notion of exceptions to copyright is inappropriate. They claim that the sole purpose of copyright law is to protect the economic and moral rights of authors and that copyright law is not the place for government to address the interests of the users of copyrighted works.

It is not uncommon for librarians and publishers to take opposing views on this issue. Clearly the protection of intellectual property rights is an issue of Central concern in copyright has important implications for more than just property rights. As an instrument than just property rights law must address broader social values as well. It should promote research and the advancement of knowledge. It should promote and protect our cultural heritage, we should not, therefore, limit the scope of what can be achieved through copyright strictly to the protection of individual provides us with an opportunity to support cultural enterprise in a broader sense. to protect the works of our writer, musicians and artists for future generations, and to do what we can to ensure the continued vitality of both creative and scholarly endeavor.

The Berne Convention makes it clear that exceptions and limitations to copyright are entirely appropriate, provided they do not control the normal economic exploitation of his or her work. If we accept the basic notion that copyright law is

about more than just the protection of rights must be viewed in the context of broader social values and public policy objectives.

From a library perspective what is reasonable includes provisions within copyright law to permit the fair use of copyrighted works for the purpose of research, education and private study.

One of the most contentious issues dividing publishers and librarians today centres on the interpretation of "fair use" in the context of digital technologies. Obviously digital technologies have the potential to undermine as well as to enhance copyright protection and we need to be certain that the economic and moral rights of the copyright owner are not infringed by the illegitimate use of those technologies. But, it is important to make a distinction between illegitimate use and legitimate exceptions to copyright.

11. Checklist for Publisher :

A publisher should taken into consideration the following points, while publishing a work :

<u>DO's</u>	<u>DON'Ts</u>
1. Works must be original.	1. Works should not have been copied from elsewhere.
2. Put a copyright notice in the form © on the work.	2. Don't sell any book by making photocopies of it or publish a book by copying substantial extracts or pictures from such book, which violates the copyright of some one.
3. Executive a commercial arrangement with the owner of the copyright for assignment of copyright as per section 19 of the copyright Act, 1957.	3. Don't publish any work without getting license for use from owner of the copyright.
4. Includes the clause in the agreement	4. Don't copy anything slavishly from a

that the liability for infringement of copyright in any manner will be that of author.

5. Although copyright registration is not compulsory but it is good to obtain registration as it can be produced as a concrete piece of evidence in a court to check infringement of copyright.
6. Report the matter to associations of trade in case of piracy or infringement of copyright for taking up the matter in arbitration, if possible.
7. Register a complaint to police immediately in case of infringement.
8. File either a civil suit or criminal complaint as per the situation in case of violation of your copyright.
9. Develop a standard form for obtaining permission to reproduce a drawing or any other material from another book.
10. Last but not least consult a legal expert in the field to determine the merits of your case.

book without taking due permission from the holder of copyright of the said book because that will amount to "unfair use".

5. Don't download blindly just about anything from the internet as the same may amount to violation of copyright.
6. Don't presume that unregistered copyright is of no value, because the registration is not necessary as the right comes to existence the moment the work has been created.
7. Don't get silly or in haste without informing the police (which now have a special cell to detect this kind of crime in every majority) in case of piracy etc.
8. Don't conceal anything minor either while registering the criminal complaint or while filing civil suit which may prove very clear at a later stage.
9. Don't hesitate to take the help of a legal expert at the hour of dire need, because the technical aspect of law relating to copyright is difficult to be understood by a person on his own.

12. Some Tips to Improve Productivity :

Let us now look at what librarians or booksellers can do or should do in employing IT to make our lives easier and render our services more productive and effective? Here are some random tips and thoughts in this direction :

12.1 E-mail is a must :

All booksellers and librarians, however small, must have an e-mail account. E-mail correspondence tends to be short. It also gets quick replies. Delivery and receipts notices can be obtained. Delivery is very fast. Booksellers can use additions, books reviews, exchange rate revision, exhibitions, special discounts, etc.

12.2 Directory of Indian Booksellers Online :

ALSD and such other organizations can come out with a directory of Indian book sellers and publishers giving their e-mail or website address. This will help librarians correspond with book sellers easily either for placing orders or for getting quotations fast. **Appendices – Two (ii)** gives website addresses of some important Indian publishers, book seller and printing house.

12.3 Set up an Intranet :

Intranets can work even without line internet connection. Libraries should immediately setup an Intranet. Even Windows 95 operating system provides a personal web server software that enables you to keep information in a central location that can be accessed by all in the network using a standard internet browser like Netscape or Internet Explores.

12.4 Subscribe to Mailing lists :

Librarians with e-mail facility can subscribe to mailing lists of special interest to themselves or to their clients. Book sellers associations may set up mailing lists or E-groups to share information quickly. It is very simple to set up an E-group.

12.5 Procure more CD's :

Indexes of CD's available in the library may be prepared and exchanged with other libraries. Now a day, it is easy to make copies of CD's also for a small fee. Duplicate CD's can be swapped among libraries.

12.6 Prefer books with CD supplement :

In the case of libraries attached to computer, IT or software companies, they have the advantage of getting many printed books along with CD's. the amount of information made available in CD as supplements to the books is enormous. It is worthwhile preparing detailed table of contents of such CD's and circulate them among users.

12.7 Online Ordering :

Ordering books is an extremely simple process. Just choose the title you need by placing them in shopping cart. Once you are through, you can delete or modify the selections out in shopping cart, enter your credit card details and press SUBMIT button. Your order is confirmed within minutes and you get a "Smart Receipt" for your payment too. Books are dispatched by courier within a day. The invoice you get includes courier charges and there are no surprises. A printed invoice is also sent by snail mail subsequently.

13. Challenges :

The challenges that lie ahead for librarians and publishers the priority issues in that would be the following :

1. The resolution of understanding issues related to "fair use" and other exceptions to copyright in a digital environment.
2. The development of an economically viable means of maintaining the support structure for scholarly communications.
3. The establishment of an effective and efficient means of formulating and managing license for the use of electronic publications that meets the needs of consumers as well as suppliers.
4. The development of standards for metadata, electronic resources locators and electronic document architecture to facilitate access to and management of electronic publications.
5. Cooperative planning of infrastructures programmes to administer the registration of electronic publications.
6. Joint Research on the preservation of digital media and the archiving of digital documents.

Copyright societies, libraries, publishers play an important role in the Information continuous. Though our effort individually and collectively we add significant value to the process of Information Exchange. We have very real mutual interests in the efficient management of published materials and effective users access to those materials. As we grapple with the newly emerging technologies and with a changing market environment we are in very significant ways attempting to redefine and reposition ourselves. Though constructive dialogue and collaborative effort we can successfully resolve the issue that challenge us today and lay the ground work for productive and mutually beneficial relationship in the future.

CHAPTER: SIX

OBSERVATIONS
AND
SUGGESTIONS

Observation and Suggestions for Amending the Copy Right Act, 1957 for the protection of Electronic Information are as following :

- 1) For works in digital format, without incurring a charge or seeking permission all user of a library should be able to :
 - i) Browse publicly available copyright material.
 - ii) Read, listen to, or view publicly marketed copyright material privately, on site or remotely.
 - iii) Copy or have copied for them by library and Information staff, a reasonable portion of digital work in copyright for personal, or educational use.
- 2) Providing access to digital format of a protected work to user for a legitimate purpose, such as research or study should be permitted under copyright Law.
- 3) The lending of published physical format digital material (i.e, CD-ROMs) by libraries should not be restricted by legislation.
- 4) Contractual provisions, for example, within licensing agreement, should not over side reasonable lending of electronic resources by library staff.
- 5) Legislation should give libraries and archives permission to convert copyright protected materials into digital format for preservation and conservation related purpose.
- 6) Legislation should also cover the legal deposit of electronic media.
- 7) National copyright legislation should render invalid any terms of a license that restrict or override exceptions or limitations embodied in copyright Law

where the license is established unilaterally by the right holders without the opportunity for negotiations of the terms of the license by the users.

- 8) National copyright Law should aim for a balance between the rights of copyright owners to protect their interest through technical means and the rights of users to circumvent such measures for legitimate, non-infringing purpose.
- 9) Copyright Law should enunciate clear limitations on liability of third parties in circumstances where compliances cannot practically or reasonably be enforced.
- 10) Scanning of photographs in GIF formats (these are usually copyrightable images; for instance a common usenet practice is to scan in playboy photographs, but these images are protected by copyright.
- 11) 'Firstsale' rules for works transmitted digitally be abolished.
- 12) Copyright infringement could be constructed if technological devices are used to circumvent copy-protection schemes that copyright owners have created.
- 13) Anti-piracy provisions were incorporated by the Amending Act of 1984 to check wide spread piracy of books as it has been made a cognizable and non-bailable offence. But, there is still no permanent relief to the publishing industry due to lack of effective execution. There should be penal provision against the people, institution, libraries who are either possessing or patronizing copies of pirated edition, once the general public became aware of such penal provisions/ there will be effective curb on such piracy activities.

- 14) Arbitration and Alternative Dispute Resolution (ADR) mechanism should be introduced within the culture of Arbitration for speedy disposal of dispute between author and publisher. Online panel of Arbitrators may be appointed under the jurisdiction of existing copyright Board or any other body like Intellectual Property Appellate Board (IPAB) on the line of World Intellectual Property Organization (WIPO).
- 15) Copyright office was established under the immediate control of Registrar of copyrights. He is kept under superintendent of the Central Government. He has to maintain Register of copyrights.
- 16) International copyright relations, which are based on treaties to be regulated by specific orders of the Central Government.
- 17) Problem of piracy in copyright should first discussed in the Lok Sabha and measures were suggested by the members. Accordingly, punishment for infringement of copyright was increased upto imprisonment upto three years and fine up to Rs. 2 Lakhs, with minimum of imprisonment upto six months and fine up to Rs. 50,000/-. Thus, no court can award sentence less than imprisonment upto six months and fine upto Rs. 50,000/-. Similarly, for second subsequent offences the punishment provided is more than the first offence. At the same time, offence of infringement of copy right is now considered as economic offences, by virtue of this amendment. Therefore, the limitation for taking cognizance of offence provided in Sec. 469 of criminal procedure code is now not applicable to the offence.
- 18) The copyright Act has undergone several changes taking into consideration the need of the people and International conventions. Now it has become again necessary to amend it taking into consideration of Information and technology faculty. Piracy in respect of computer software has increased. There is no protection to the software prepared and one can easily pirate the

same pictures and programmes loaded in computers can also be downloaded easily.

- 19) Computer hardware, equipment functional components have been traditionally protected by granting patents. But field of software is considered to be a field of literary work and therefore it is protected by copy right. Copyright is granted to the creators of original works of authorship. In our country, recently, Information and Technology Act, 2000 has been enacted to authenticate the Information received by the use of the computers or to regulate the e-commerce. It has suitably amended Indian Penal code. However, the Act is not providing for protecting softwares. Thus, to protect software by copyright and also to recognize the rights of intellectuals as Intellectual property is a need of todays.
- 20) The term of copyright for computer programme has not been mentioned in the IT Act, 2000.
- 21) In the Act, the author of the literary work shall not be the owner of the copyright as ownership rests with proprietor of periodical, newspapers in such cases the author becomes defacto owner of the copyright.
- 22) Due to the impact of IT and telecommunication system further amendments suggested by National Law School of India University (NLSIU) should be made clear as per WIPO copyright Treaty (Geneva) 1996.
- 23) Application of copyright Act in libraries and Information centres needs different legal basis as L & IC own documents to one where all they do is lease the use of Information and Communicate to the public which is otherwise violation of copyright and also infringement of Geneva treaty. For this problem there is requirement of certain amendments.

- 24) Attempt could be made to create awareness about intellectual property right and to alter the situation in the developing countries.
- 25) It should be cover to Internet with the changing technology and globalization communication.
- 26) Stopping users from directly logging on as root (super user) or administrator from remote.
- 27) Using passwords that are difficult to guess and regularly changing them.
- 28) Encrypting all the sensitive information and e-mails transmitted over the Internet.
- 29) Section 57 of the copyright Act. 1957 speaks of author's special right. It does not speak of publisher's or owners special rights. There should be similar provision for publishers also to take effective step against person/agency committing any action prejudicial to their honour, reputation and interest.
- 30) Since there is no copyright in ideas, the author enjoys an unhindered right. He has liberty to approach various publishers at the same time even after reaching an agreement with a publisher for a work on similar subject. There should be a clause of "reasonable restriction" to prohibit the authors from indulging in such kind of unholy practice which creates unnecessary competition and ill will among the publishing fraternity and also spoils the reputation and goodwill of both author and publisher.
- 31) As a violation of copyright amounts to an act of piracy it must be proved by clear applying the various test laid down by the cases of Law.

CHAPTER: SEVEN

SUMMARY

AND

CONCLUSION

At the outset IPRs in digital age is acquiring an inseparable status and there is an urgent need to study the Laws related to printing and other media at different levels. If one has to make best use of all the media available, one has to surely learn, monitor and incorporate new developments, participate in consortiums related to digital media continually update and validate digital content by coordinating with legal representatives and adopt appropriate strategies to limit risk factors.

The 21st century Libraries vis-a-vis Information Centres & the professionals find themselves at the threshold of an explosive revolution. The development in Communication Technology have triggered unprecedented changes in corporate activities. The purpose of 'Internet' is make its content economically viable for the benefit of the newly emerging information society. This would largely depend on how successfully one is able to resolve the issue related to IPRs.

Today we live in a world of instant global communications. It is an era of fast technological development and Information Technology. In recent times techniques for reproducing documents and access to documents through faster communication has become reality. New techniques for sound recording and visual images have increased. Simple, inexpensive and readily available magnetic tape reproduction equipments with low cost tapes, cassettes have made copying of phonograph records

simple. New computer technology has brought a revolutionary change. These technologies are providing unlimited opportunities for communication between people and helped many people to reproduce documents and other materials illegally on a large scale causing problems to copyright owners and Government agencies. A number of laws are being enacted to protect copyrights.

The shift from "Wheels Revolution" to the "Information Technology" has element of uncertainty, challenging and interesting times. Attempt to apply yesterday's concepts of tomorrow's society appears to the futile. A few aspects of life will survive the cybernetics unscathed by this is itself a natural process that is set in. the parameters of e-commerce set by the IT Act, 2000 stands on four key cornerstones of trustworthy transaction integrity, authenticity, confidentiality and non repudiation, where the certification agencies will issue certificates to individuals, corporate and business entries. The IT Act, 2000 is wide enough to protect the rights of the web page owner. An uploaded material in the net satisfies the requirement of data under the IT Act, 2000 section 2 (0), which means, "Whoever downloads, copies or extracts any data or databases" or reduces the value of data shall be liable to pay damage under section 43 of IT Act and also liable for hacking under section 65 of the same Act. This is at the moment an extreme proposition and interpretation, but the changing times with market economy and many more erstwhile copyright aspects will find IT Act type damage which of course is not the real intent of the IT Act, 2000.

In India, the copyright law is governing the computer software generally. The copyright Act, 1957 is being described as one of the stringent protection law in the world. The layering process, as well as the opportunity for such advocacy for Intellectual property is just beginning. The validation of the existing copyright law and expansions made to encompass software protection appears as a more cosmetic approach. Ever time a consumer buys a computer loaded with unlicensed software products he is party to the crime. The menace of software piracy or violation of copyright affects not only the potential of software development in India but also our country's economy, besides sending negative signals to potential investors. The potential rise and the phenomenal growth in software sector need to assure and ensure the knowledge workers with the economic benefits, which is the under current in new paradigm of "Online knowledge market". In the make fit arrangement with the traditional plasticity and transmissibility of the digital creations. The convergence bill 2001 need to be better debate holistically to make it apt and synchronize the issues to meet the impending challenges the country is likely to face the Internet, the generously generated software packages and applications. Care need to taken that there are no violation of IPR regime from with the country and at the same time to provide safeguard and security for the generated Intellectual property.

The changing concept of technology in electronic era made a substantive availability Information including the electronic products in various forms in libraries and Information centres. The librarians including the Information officer could spawn

scope to satisfy the varied interest of the user communities by providing the Information in electronic form through Internet CD-ROM, Floppy etc. The technology is racing ahead for a revolution to take place in the publishing industry, But it is not possible to see the explosion of publishers on the net without putting the legal issue of the copyright in the right place. Both the publishers and authors need protection from digital copying and distribution to preserve the authenticity of their work.

Electronic publishing is a process for production of typeset quality document containing text, graphics, pictures, equations, tables etc. that is used to mean any information source published in electronic form. Further, the electronic publication includes sources like magnetic tapes, videodiscs, and images.

In electronic era, electronic publishing is a decisive constituent to prove the validity and the validity of technological efficacy of information sources in the most appropriate and effectual manner, in the present century, the only option left out for the Libraries and Information Centres to espouse the devices of accumulating the electronic information in various forms and the creation of different database of their own excluding the databases available in Internet will certainly bring a positive accomplishment of the goal and aspiration of the user communities as the e-publishing is more efficient .cost effectiveness, greater educational collision, better reach, providing customizing at the student level, improved student exposure, enhancement of research value.

Librarians have an important role in protecting the rights of the patent holders and others in the field of industrial designs, designers, trade secrets, layout designers of integrated circuit etc. the librarians should keep themselves aware with the latest changes in IPR and to over see there proper implementation while purchasing books and other materials and also when these are used in the library. It is a social obligation that the librarians have to perform. In the curriculum of Library and Information science, keeping in view the importance of access to information it should include various issues related to IPRs been framed specially for the librarians. It should, thus, help the society to protect the IP owner from plagiarism, counterfeiting and other malpractices in time of growing information technology evolution of global media and communication revolution.

Librarians and Information professionals recognize and are committed to support the needs of their patrons to gain access to copyright works and the Information and ideas they contain. They also respect the need of authors and copyright owners to obtain a fair economic return to their Intellectual property. Effective access is essential in achieving copyrights objectives.

Copyright law impacts on most of what libraries do. It affects the services that libraries can provide to their users, and the conditions on which they can provide

access to copyright materials. It the way in which libraries can act as navigational agents and undertake effective archiving and preservation activities.

Libraries have crucial role to play in controlling as well as facilitating access to the increasing number of local and remote electronic information resources, librarians and information professionals promote respect for copyright and actively defend copyright works against piracy, unfair use and unauthorized exploitation in the digital environment, libraries have long acknowledged that they have a role in information and educating users about in encouraging compliance.

Today, it is widely believed that personal computers, cable television, the internet and the telephone system are covering into a giant hose that will spray huge amounts of data – Intellectual property. As this occurs, according to the conventional scenario, the economic winner will be those who own the zeros and ones not those who make equipment that copies, transmits and displays them. Because copyright is the mechanism for establishing ownership, it is increasingly seen as the key to wealth in Information of Intellectual property into electronic form creates new problems. If the cost of manufacturing and distributing a product falls, economic forces will drive down its price too. The net embodies this principle to an extreme degree.

In addition creators' deals with piracy, which is vastly easier and more effective in the digital environment. People have long been able to photocopy texts, tape records music and videotape television shows. If the document (film) is digitized into a computer file, it can be e-mailed to millions of people in minutes, because strings of zeroes and ones can be reproduced with absolute fidelity the copies are perfect. And online pirates have no development costs. In other words even as a digital technology drives the potential value of copying to even greater heights, the same technology threatens to make it next to worthless.

The paradox has created two situations. One is to advocate eliminating copyright altogether. Anti copyrights believe that the increased ease of copying effectively obviate the © symbol and all its initials. In this view, copyright restricts what people can do with the intellectual property coming through the wires. It tries to fence the electronic the electronic frontier.

It unjustly creates monopolies in the basic commodity of the Information age. The other opposing recreation is to strengthen the hands of copy right owners.

The library Association copy right Alliance (LACA)) of U.K. supports the effective enforcement of copyright and recognizes that libraries, information services

and archives have a crucial role to play in controlling as well as facilitating access to the increasing number of local and remote electronic Information resources. LACA maintains that over protection of copyright could threaten democratic traditions and impact on social justice principles by unreasonably restricting access to information and knowledge. If copyright protection is too strong, competition and innovation is restricted and creativity is stifled.

The answers to the questions like: Does the nature of the technology require us to change the legal understanding or status of copyright as it stands now? What rights should be associated with to web content? And How should the rights be expressed, and should the expression of the rights be used for notification, enforcement or payment negotiation? Does not necessarily lie solely in technology nor policy, but the rational combination of both.

IPR is something that affects us every day. We should be conscious of its effects on our economy. It is not enough to have strong laws but strong mechanism to enforce, like the judiciary, police and the customs.

It remains to be seen whether strict adherence to copyright laws is possible. If it is going to be meaningful protection, it has to be done on a global basis through international treaties that all nations are prepared to recognize and follow.

APPENDICES - I

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11. www.nasscom.org
12. <http://www.jisc.ac.uk/pub/copyright/intro.com>
13. www.alo.org
14. www.internetmisuse.com
15. www.eecocommunications.com
16. www.bitlaw.com
17. <http://www.digitalcentuary.com>

APPENDICES - II

i. DIRECTORY OF ...

ii. COPYRIGHT SOURCES ...

Appendices – II (i)

Copyright Sources on the internet

A variety of materials dealing with copyright is available via the Internet for information or downloading. The samples below are cited as of May 1995.

Association of Research Libraries

(ARL) Gopher site : arl.cni.org

Although under construction at this time, plans for the ARL Gopher include general information about ARL as well as content areas of Scholarly Communication, information Policy, Access to Research Resources, Collection Development, Preservation, Technology, Staffing, Management and Statistic.

Copyright policies for various university libraries can be found under information Policy/Copyright.

If you have any questions or comments, please direct them to :

Dru Mogge

Electronic Services Coordinator

Association of Research Libraries

21 Dupont Circle, Washington, DC 20036

e-mail : dru@cni.org 202-296-2296

Coalition for Network Information

The Coalition is a joint project of the association of Research Libraries, EDUCOM, and CAUSE. The purpose of the CNI is to promote creation of and access to information resources in networked environments in order to enrich scholarship and enhance intellectual productivity. Over 200 organization and institutions are members of the Coalition Task Force, which sponsors several listservs.

The Coalition's Home Page Address Is

<http://www.cni.org/CNI.homepage.html>

There are links on the page to the Coalition's Gopher server, and you can get into the archives of the CNI-Copyright list that way. There are no plans to provide more HTML oriented markup of the data from the CNI-Copyright list. It is too labor-intensive.

To Get Help on Subscribing

For information on subscribing to the CNI-Copyright list, or any other forum on the Coalition's Unix-Listprocessor server, send this command as an e-mail note to the address of the Coalition's Unix Listprocessor server (listproc@cni.org)

Help subscriber

To Join the CNI-Copyright Forum

You may join this list at any time by sending this command as an e-mail note to the Unix-Listprocessor on the Coalition's server (listproc@cni.org)

Subscribe <list name> <your real name>

e.g., subscribe cni-copyright john doe

By sending electronic mail to the address cni-copyright@cni.org, you will distribute message to the other participants of this list.

Archives of the CNI-Copyright Forum

All postings to the CNI-Copyright Forum are archived. For information on accessing the archives of the CNI-Copyright forum, please send this command (as an e-mail note) to the address listproc@cni.org

Get cni-announce-does about.list.archives

For Further Information on the CNI-Copyright Forum

All question regarding the substance of, or policies related to, the discussions on this forum, and queries regarding difficulties with mail or requests for technical should to the Coalition's systems coordinator, Craig A. Summerhill.

Craig A. Summerhill, Systems Coordinator and Program Office
Coalition for Network Information

21 Dupont Circle, NW

Washington, DC 20036

Internet : craig@cni.org AT & Tnet (202) 296-5098

Other questions regarding the Coalition and its program should be directed to Joan Lippincott, the Coalition's assistant executive director.

Joan Lippincott, Assistant Executive Director

Coalition for Network Information

21 Dupont Circle, NW

Washington, DC 20036

Internet : craig@cni.org AT & Tnet (202) 296-5098

Copyright FAQ

Copyright FAQ by Terry Carroll, an associate in the Palo Alto, California, office of the Law firm of Cooley Castro Huddleson & Tatum. (The FAQ does not reflect the views of the law firm or its clients).

This FAQ contains six documents dealing with copyright from an introductory perspective. It can be obtained at the following sites :

rtfm.mit.edu:/pub/Usenet/news.answers/law/Copyright-FAQ

ftp.netcom.com:/pub/carrollt/law/copyright/faq

Note the mixed case in "Copyright-FAQ" in the first directory name. FTP is case-sensitive, so this significant (e.g., "copyright-faq" is not the same as "Copyright-FAQ").

Copyright Clearance Centre

The Copyright Clearance Centre has established CCC Online, designed to help users gain has photocopy copyrighted material. Anyone with access to the World Wide Web on the Internet has access to CCC Online. The URL (universal resource locator) for CCC Online is :

<http://www.directory.net/copyright/>

Some of the capabilities of this new resource are :

- Anyone with WWW access can search through the catalogs and see royalty information.
- Current customers of the Transactional Reporting Service can report their copying via CCC Online. (Academic Permissions Service customers reporting course pack copying will be able to report copying in summer 1995).
- Users can sign up online as a customer.

CCC invites feedback through the button provided on every "page". Questions about the service in general may be directed to :

Dave Davis, Senior Account Representative, TRS
Copyright Clearance Centre
222 Rosewood Drive
Danvers, MA 01923
(508) 750-8400 Fax : (508) 750-4770
e-mail : ddavis@copyright.com

Copyright Office, Library of Congress

Frequently requested Copyright Office circulars and announcements and the most recent proposed as well as final regulations are now available over the Internet. These documents may be examined and downloaded through the Library of Congress electronic information system LC MARVEL. To connect:

Telnet to marvel.loc.gov and login as "marvel."

Then select the Copyright menu.

There is no charge to connect to LC MARVEL, which is available 24 hours a day.

In addition, three online to files of Copyright Office records are available free of charge via the "marvel" login or by telnet to locis.loc.gov or to the numeric address 140.147.254.3. No. password is needed. Follow the menus to enter the files. Any two or all three files may be combined for searching. After getting into one of the files through the menu, enter BGNS COHM/COHD/COHS. This will combine the three files.

1. The COHM monograph file contains some 10 million index terms. Title, author, and claimants are indexed.
2. The COHD documents, file, which lists transfers of ownership recorded in the Office, contains more than 1,375,000 index terms. Title and parties are indexed.
3. The COHS serials file contains more than 341,000 index terms. Title, author, and claimants are indexed.

In the near future, the Office plans to add rights and permissions information to registration records. Searching-related questions should be sent to Carol Kilroy, kilroy@mail.loc.gov

An Intellectual Property Law Primer for Multimedia Developers

By J. Diane Brinson and Mark F. Radcliffe

The "Primer" is excerpted from the book *Multimedia Law Handbook : A Practical Guide for Developer and Publishers* (Mentlo Park, Calif. : Ladero, 1994). The documents, four chapters, and an introductory section of the *Multimedia Law Handbook* can be obtained free of charge from the Computer and Academic Freedom (CAF) subdirectory of the Electronic Frontier Foundation :

[ftp.eff.org/pub/CAF/law/multimedia-handbook](ftp://ftp.eff.org/pub/CAF/law/multimedia-handbook)

<http://www.eff.org/pub/CAF/law/multimedia-handbook>

The materials can also be accessed from the EFF via Gopher and the ETEXT archive at the University of Michigan.

The Coalition for Network Information has a link to these materials on the Coalition's Gopher server : <gopher://gopher.eff.org:70/00/CAF/law/multimedia-copyright>.

The Seamless Web – Law and Legal Resources

<http://seamless.com/> and

<http://tsw.ingress.com/tsw/>

U.S. Department of Commerce (1994)

Intellectual Property and the National Information Infrastructure : A Preliminary draft of the report of the Working Group on Intellectual Property Rights (The "Green report").

The "Green Report" may be obtained through Gopher at this address : itf.doc.gov. Transcripts of testimony concerning the report are available there as well; the final report, or "White report," too, is expected to be available here.

Appendices – II (ii)

"Directory of Indian book sellers, publishers and printers on the Internet" has been taken from the web site: [<http://www.khoj.com>]

1. <http://www.tatamcgrawhill.com>
2. <http://www.transworldresearch.com>
3. <http://www.atalanticbooks.com>
4. <http://www.bpagency.com>
5. <http://www.techmediabooks.com>
6. <http://www.bharatbook.com>
7. <http://www.capitalmarket.com.in>
8. <http://www.dkagencies.com>
9. <http://www.dkpindia.com>
10. <http://www.delhilawhouse.com>
11. <http://www.deshvidesh.com>
12. <http://www.prakashan.com>
13. <http://www.goldenpub.com>
14. <http://www.nitechprint.com>
15. <http://www.indiabookstone.com>
16. <http://www.indiabookfair.com>
17. <http://www.indiapaper.com>
18. <http://www.ippindia.com>

19. <http://www.kitab.com>
20. <http://www.kitabbhavan.com>
21. <http://www.law-publications.com>
22. <http://www.nabhipublications.com>
23. <http://www.indiatrade.com>
24. <http://www.prestigebooks.greatindia.com>
25. <http://www.viswapublish.com>
26. <http://www.ebdbooks.com>
27. <http://www.taxpublishers.com>
28. <http://www.venusbooks.hypermart.com>
29. <http://www.indiaworld.co.in>
30. <http://www.ppindia.com>